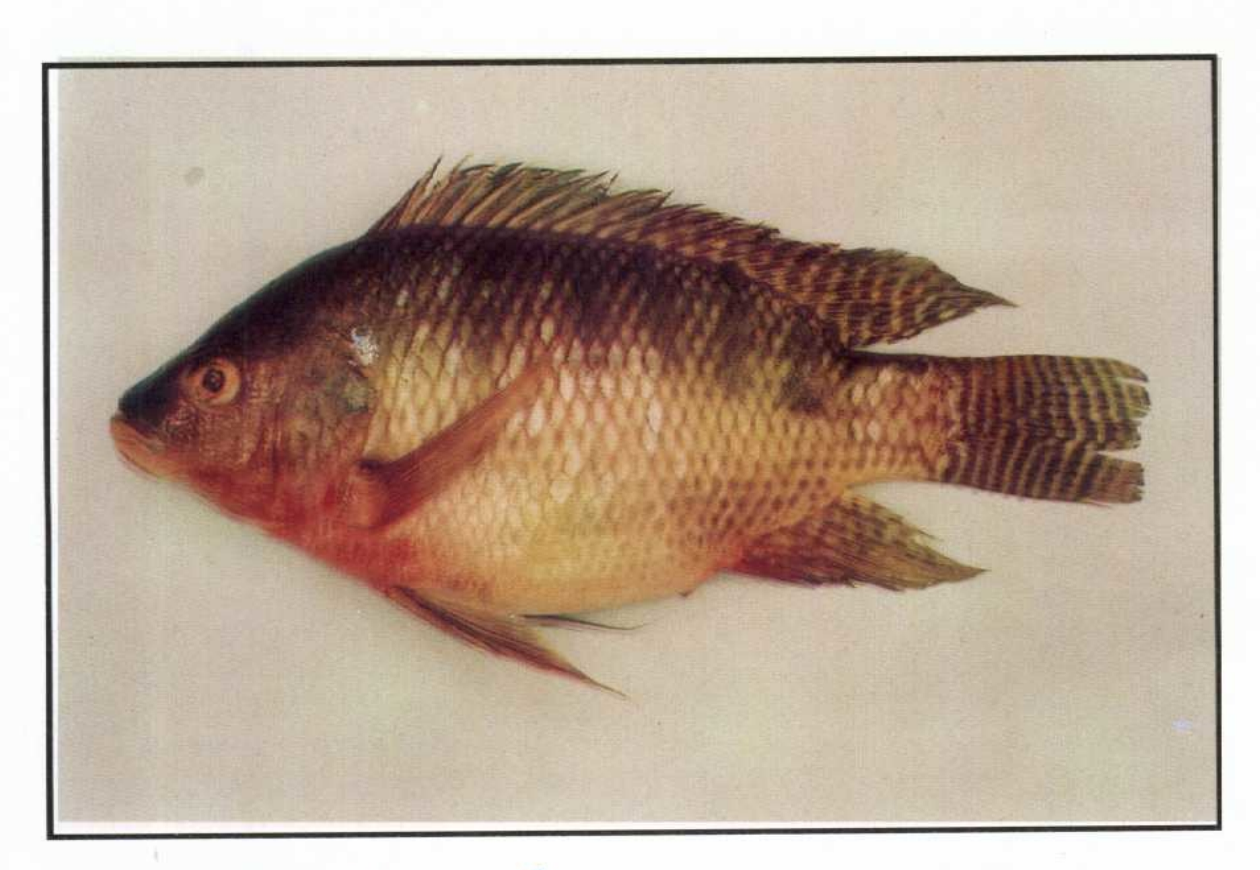
ARAB REPUBLIC OF EGYPT
CABINET OF MINISTERS
EGYPTIAN ENVIRONMENTAL AFFAIRS AGENCY (EEAA)
DEPEARTMENT OF NATURAL PROTECTORATE



FRESHWATER FISHES



BY

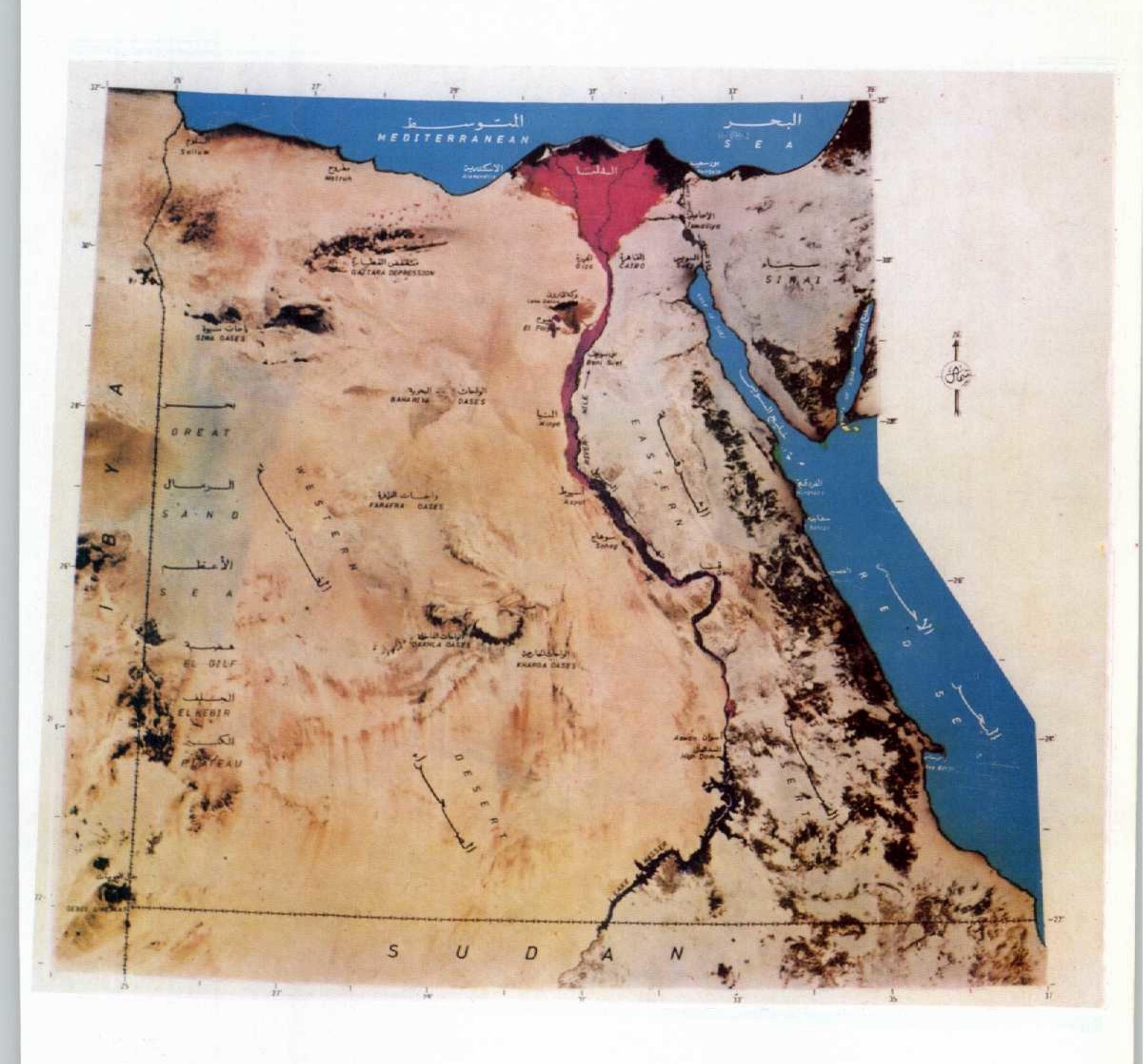
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Publication Of National Biodiversity Unit. No. 9, 1997

LANDSAT SATELLITE IMAGE
OF THE ARAB REPUBLIC OF EGYPT
FROM 950 km ALTITUDE

صورة فضائية لجمهورية مصر العربية
من القمر الصناعى « لاندسات »
من إرتفاع ٩٥٠ كيلو مترا



DEDICATION

THIS BOOK IS DEDICATED TO :

-The souls of the Ancient Egyptians who were pioneers in conservation of natural resources and keeping the Nile clean from pollutants.

-To all those living along the River Nile.

-To all those who are taking part in studying the Nile and its living organisms.

THE AUTHORS

PREFACE

Egypt signed the International Convention on Conservation of Biodiversity in 1992, and within the framework of the Egyptian Environmental Affairs Agency, the Department of Natural Protectorates founded a National Biodiversity Unit (NBU) which is concerned with studies and research on biodiversity. One of its goals is to publish the results of these studies to be available to research workers and those who are interested in conservation of natural resources, educational and cultural affairs.

As a result of the activity of NBU 60 parts on "Biodiversity of Egypt" were prepared. The aim of the Unit is to publish these studies of which seven volumes have been issued : "Habitat Diversity of Egypt"; "Natural Protectorates of Egypt", "Egypt Country Study on Biodiversity", "Guide to Mammals of Natural Protectorates in Egypt", "Amphibians and Reptiles of Egypt", "Biodiversity of Fungal Biota in Egypt" and "Birds of Egypt".

This publication is the ninth in the series which incorporates a survey of "Freshwater Fishes of Egypt", their biodiversity, taxonomy, status, endangered species with available information on the taxonomy, geographic distribution, biology and ecology of each species. This provides a complete survey of Nile Fish fauna in Egypt, and is a sequel of Boulenger (1907) excellent book on "Fishes of the Nile", an Arabic Atlas of Freshwater Fishes by Zein El-Din (1960) and Fisheries of Lake Nasser (Abd El Latif, 1974).

This study is prepared by two scientists Dr. Helmy M. Bishai, Professor of Fish Biology and Aquatic Sciences, Faculty of Science, Cairo University and Dr. Magdy T. Khalil Assistant Professor, Ain Shams University. Prof. Bishai worked on fish biology, aquaculture and limnology for more than 45 years and carried out basic studies in Sudan during his work along the River Nile. He has a wide experience on Nile Fish and supervised a school of research workers in the Sudan and Egypt working on the biololgy of Nile Fish and those in Lakes of Egypt. Dr. Khalil has a wide experience on aquatic environment and took part in many projects in the Nile and Northern Lakes. To them we express our thanks and appreciation.

We hope that this publication will be useful and fills a gap in our knowledge to all who are interested in fishes and Nile fisheries, fishery management and development . It is an Egyptian contribution in the international field of Ichthyology and field of conservation of natural resources.

Salah Hafez

Excutive Officer, EEAA

CONTENTS

INTRODUCTION

Since the publication of the great work "Description de l'Egypt" (1809- 1827) by Geoffroy Saint-Hilaire ; Rüppell (1829- 1832) ; de Joannis (1935) and Boulenger (1907) on "The Fishes of the Nile", little has been published on the subject. Sandon (1950) published "Illustrated Guide for the Fishes of the Sudan" ; Amirthelingam and Khalifa (1966) "Guide to the Commercial Freshwater Fishes in the Sudan" (Arabic and English); "Atlas of Nile Fishes" (Zein ElDin 1960 -Arabic), Abdel-Latif (1974) on "Fisheries of Lake Nasser" (1974); but none dealt with changes of species diversity after the construction of Aswan Dam (1912) and the Aswan High Dam (1964). Many of species of fish disappeared, others began to show a marked decline, especially in the downstream areas where water is almost lentic. However, even spawning may take place, the absence of natural nurseries during flood reduced greatly their survival and growth rate. This may be probably one of the most important factors that affected the distribution of riverine fish species that had not yet been adapted to the new ecological conditions in the Nile.

In the present survey an attempt is being made to elucidate the present states of Nile fish species in Egypt, yet there is a great need for further thorough and comprehensive studies. Changes in the nomenclature of some Nile fish were brought by various authors, certain genera were split in two or more genera e.g. *Tilapia* which are followed here. The objective of the present survey is to identify as many as possible of the fishes in Nile system in Egypt from mouth of Damietta and Roseta branches of the Nile to Lake Nasser and to assess the effects of the ecological changes and stresses upon species diversity of the Nile.

More than 4000 years ago Ancient Egyptians were well acquainted with the various freshwater fishes inhabiting the Nile. Ancient Egyptian artists recorded in their painting and carvings these species which were drawn accurately, skillfully and even to minute details that one can easily identify the species (Figs. I, II and IV). Furthermore Ancient Egyptians recorded the various fishing methods they used (Oric Bates, 1917), i.e. spear, hook and line, wheel, cast or throw net, seine net (Figs II and IV), double hand net and plunge basket (Fig. III). It seems that the Ancient Egyptians were aware of the conservation needs of their natural resources. The gear they used were adopted to catch large-sized adult fish (Figs. I-IV); thus leaving small fish to grow and breed. They never used fish flesh as a bait as recorded in the Death Book "I did not catch a fish using a bait from the flesh of another fish".

From the rich paintings, carvings and mummified fish it seems that many fish species which were common in Ancient Egypt probably disappeared from Egypt or, are becoming rare.

Boulenger (1907) mentioned that Loat in his survey during 1899 - 1902, recorded 85 species inhabiting the Egyptian Nile waters. Most of this reference collection is exhibited at the Zoology Department, Faculty of Science, Cairo University. In the present survey 71 fish species have been recorded in the Nile system from Egypt, 22 species are common in the commercial catch while 49 are rare. Fourteen species which were previously recorded by Boulenger (1907) were not recorded during the last thirty years and probably disappeared. Nine alien species were introduced. It is expected that during years of exceptionally high floods (as in 1996) some species which disappeared or being rare in the catch may appear and or their production is higher than that of previous years.

This publication on Freshwater Fishes of Egypt is a part of studies on Biodiversity in Egypt, designed to those interested in fish taxonomy, fish management, fish culture etc. For statistical recording system for fishes there are usually two goals : (1) providing the departments concerned or policy makers for fisheries with estimates of the quantity of fish caught and, (2) providing fishery managers with a measure of the state of fish stocks and their importance to national economy.

The first goal is a crude level for identification which is often satisfactory and statistics could be based on size, value of major varieties. Taking *Tilapia* as an example taxonomic studies (Trewvas, 1984) revealed a complex group of three genera. These are *Tilapia*, *Oreochromis* and *Sartherodon* with different characteristics including growth rate, breeding pattern, feeding habits, fecundity and tolerance to various salinities. The species recorded from Egypt are : *Oreochromis niloticus niloticus, O. aureus, Sarotherodon galilaeus* and *Tilapia zillii*, all are tabulated under the name "Bolti", but it is necessary to be able to recognize individual species. Thus, in Lake Nasser the most common species at the beginning of the filling of the Lake was *O. niloticus niloticus.* At present the most common species is *Sartherodon galilaeus* while *O. niloticus niloticus* (which has a much higher growth rate) forms less than 20 % of the total Tilapia catch.

According to Eccles (1992) if a species is unimportant to the fisheries it should be recognized to avoid confusion with the closely related and more important species.

A species is generally recognised as a population of similar organisms that are able to interbreed. Different species living together they very rarely mate and form hybrids, a feature which is rare in fishes in the wild. It can, however, occur when an egg of one species is accidentally fertilized by a

drifting sperm in running water. Hybrids are sometimes obtained experimentally because of unusual conditions which upset normal mating behaviour. This phenomenon was used by fish culturists to obtain high percentage of males by interbreeding *O. niloticus* and *O. auerus*, or red Tilapia : *O. mossambicus* (female) and *O. niloticus* (male).

It is necessary in fisheries management to identify the species concerned before one can understand the effect of exploitation and try to recommend the suitable actions for management of the resources. This is because a reduction of one species may result in changes in production of the whole group.

In practice, we recognize individual species because they share certain characters which differ from those shown by other species. The differences are sometimes very slight, but if they are consistant between populations they indicate that these may not interbreed.

Acknowledgment

The authors are greatly indebted to Professor M. Kassas, Emeritus Professor of Botany and Applied Ecology at Cairo University for his interest and continuous encouragement. Our thanks are also due to Professor Dr. Esam Elbadry, Director of Natural Protectorates Department, Egyptian Environmental Affairs Agency (AAEE).

We would like also to thank Professor Paul Skelton, Director of JLB smith Institute of Ichthyology, South Africa, and his colleague Mr. Roger Bills for their invaluable assistance in revising some of the scientific names of the checklist of freshwater fishes of Egypt. Moreover, our thanks are due to JLB Smith Institute for permitting us to use some coloured photocopies of fish occurring in Egypt and included in their valuable publication "Freshwater Fishes of Southern Africa", first edition, published by Southern Book Publishers (Pty) Ltd.

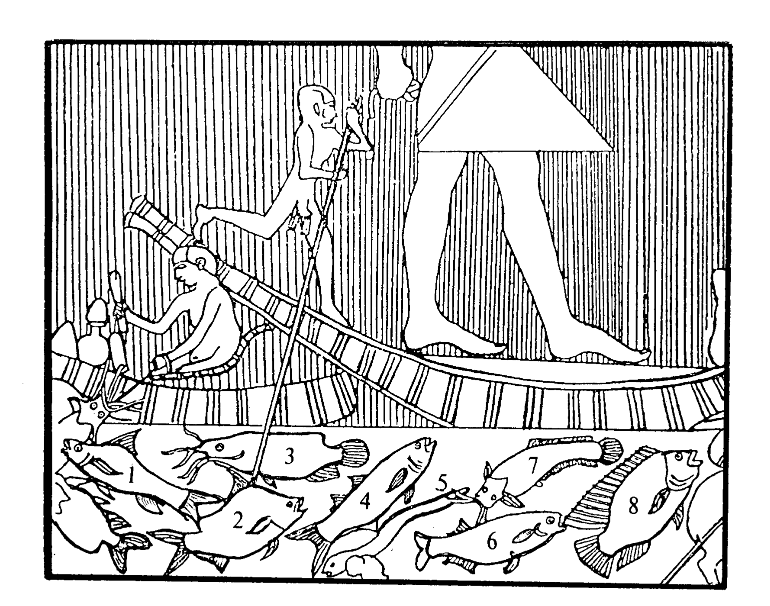


Fig. I : A drawing from TI Mastaba, Sakkara from the early V Dynasty showing TI sailing among Papyrus plants, while a fisherman in his small boat (behind) is pulling a fish he caught by his rod. Underneath the boat the artist drew the most common Nile species in a skillful and accurate manner that could be identified to :

(1) *Labeo* sp.
(2) *Citharinus* sp.
(3) *Clarias* sp.
(4) *Atherina* sp.
(5) *Anguilla* sp.
(6) *Raimas* (*Barilius*) sp.
(7) *Clarias* sp.
(8) *Tilapia* sp

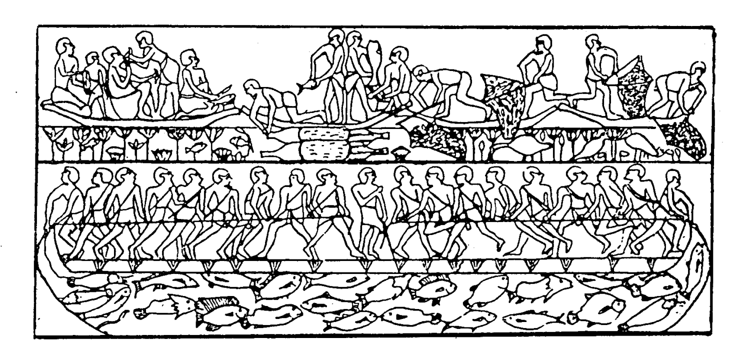


Fig. II : A painting from the TOMB of MIRA (VI Dynasty) where different fishing methods were recorded :

Upper left : MIRA helping in fishing while his servant offering him a drink. At the front end of the boat another servant cleaning the fish to be ready for roasting.

Upper Middle : in another boat four fishermen, one emptying the plunge basket from fish.

Upper Right : third and fourth boats with fishermen using nets for fishing. Underneath drawing of cormorants and pelicans are seen among Lotus flowers. In the lower painting a group of fishermen pulling ashore a net full of various species of fish [Notice the uniform size of fish].

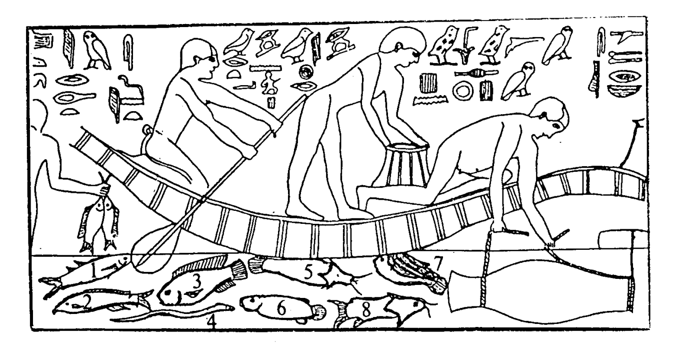


Fig. III : A painting from TI Mastaba Sakkara showing fishing by plunge-baskets. A fisherman pulling the basket, while another is waiting to empty it in a container. The artist recorded the following :

(1) *Atherina* sp. (2) *Mormyrus* sp. (3) *Tilapia* sp.
(4) *Anguilla* sp. (5) *Clarias* sp. (6) *Malopterurus* sp.
(7) *Tetrodon* sp. (8) *Bagrus* sp.

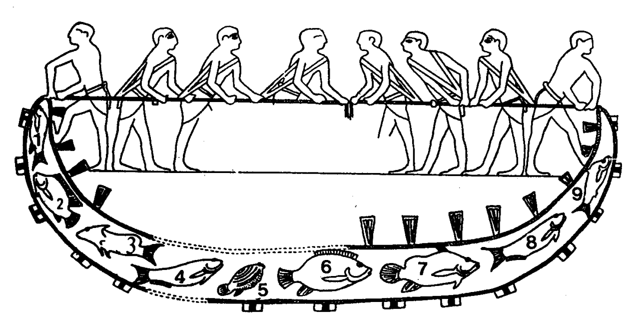
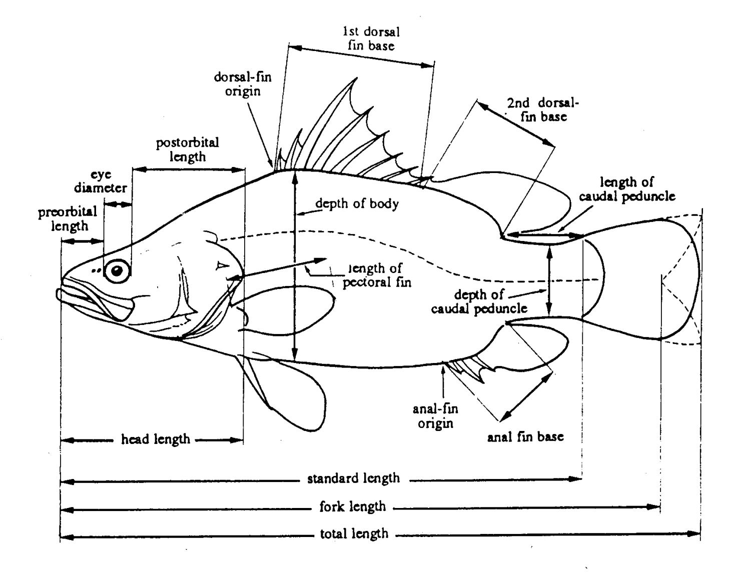
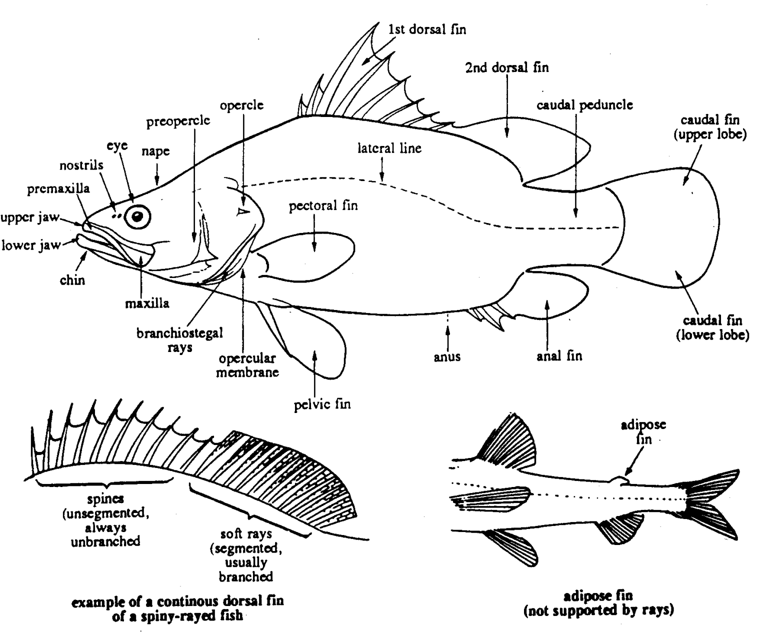


Fig. IV : The ancient Egyptian seine, required eight to ten men to haul it, not only by hand, but very frequently, shoulder slings as well, as shown in the drawing. The artist recorded some common Nile fishes:

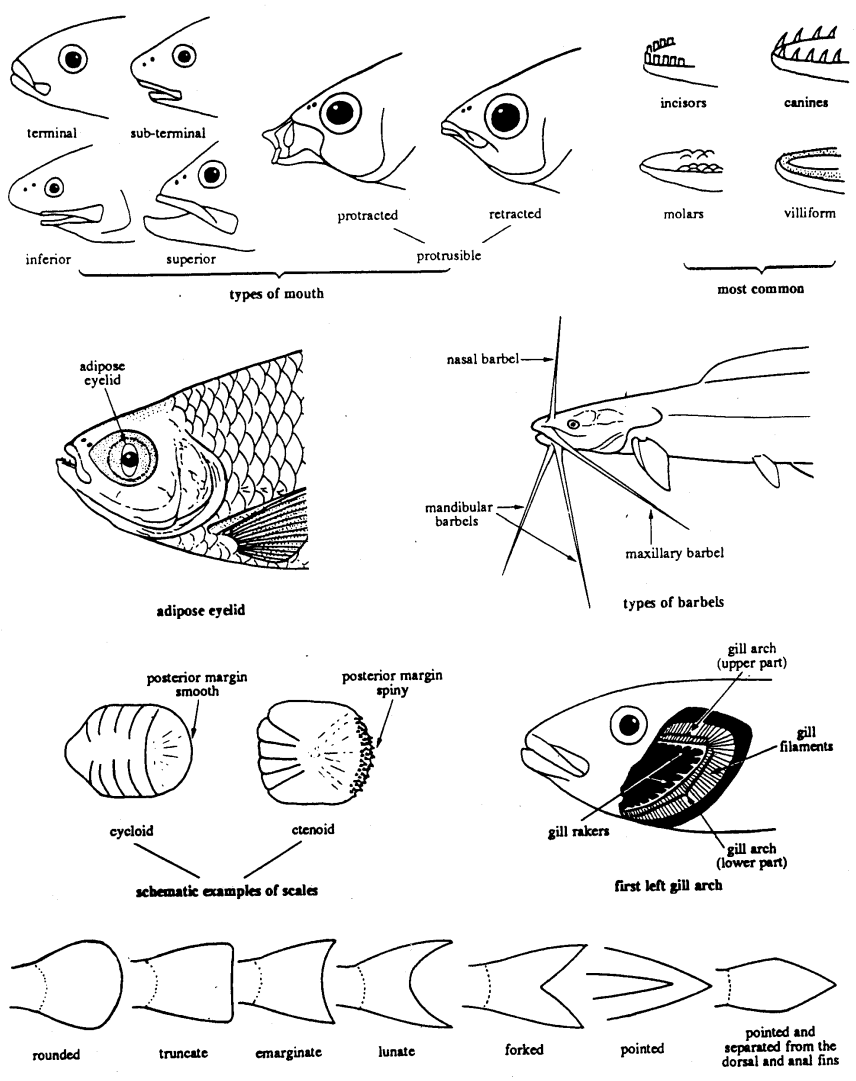
(1) *Atherina* sp. (2) *Tilapia* sp. (3) *Synodontis* sp.
(4) *Alestes* sp. (5) *Tetrodon* sp. (6) *Paratilapia* sp.
(7) *Auchenoglanis* sp. (8) *Alestes* sp. (9) *Schilbe* sp.



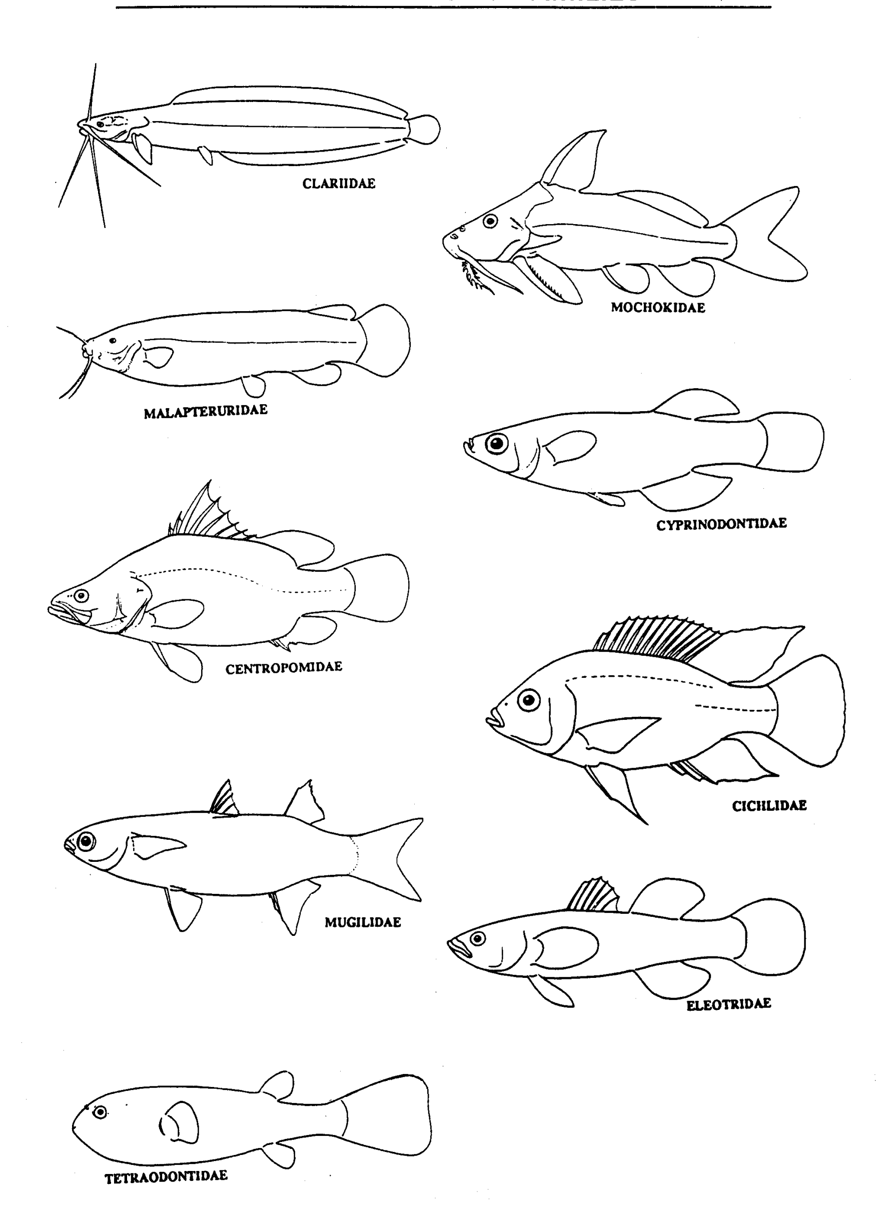


example of a continous dorsal fin of a spiny-rayed fish

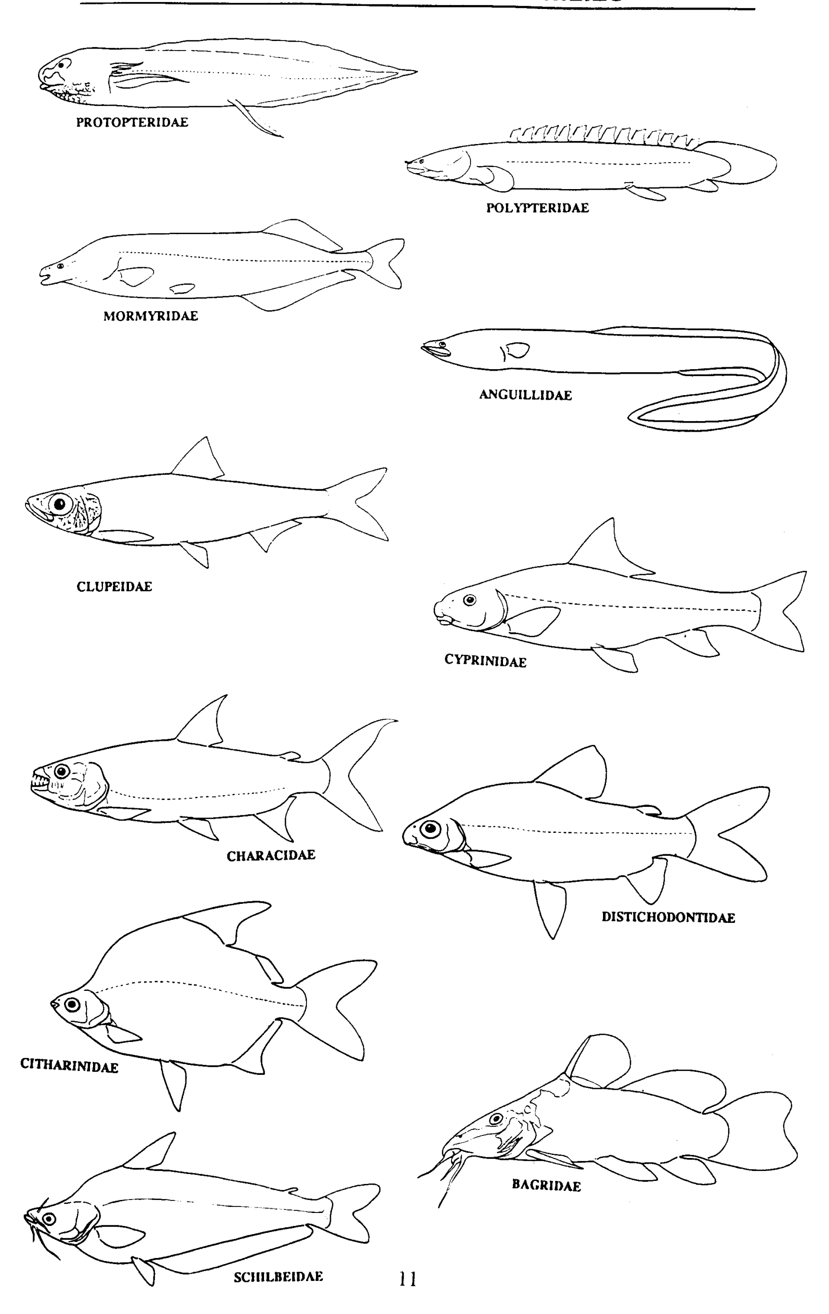
adipose fin (not supported by rays)


terminal
sub-terminal
inferior
superior
protracted
retracted
protrusible
types of mouth
incisors
canines
molars
villiform
most common
adipose eyelid
adipose eyelid
nasal barbel
mandibular barbels
maxillary barbel
types of barbels
posterior margin smooth
posterior margin spiny
cycloid
ctenoid
schematic examples of scales
gill arch (upper part)
gill filaments
gill rakers
gill arch (lower part)
first left gill arch
rounded
truncate
emarginate
lunate
forked
pointed
pointed and separated from the dorsal and anal fins
most common types of caudal fin

A PICTORIAL INDEX TO FAMILIES



A PICTORIAL INDEX TO FAMILIES



LIST OF FRESHWATER FISHES IN EGYPT, THEIR STATUS AND DISTRIBUTION

Species	Status			Distribution
	Common	Rare	Extinct	
Protopteridae				
1-*Protopterus aethiopicus* Heckel.		*		Lake Nasser
Polypteridae				
2-*Polypterus bichir* Geoffr.		*		Lake Nasser
Mormyridae				
3- *Mormyrops anguilloides* L.		*		Upper Egypt Nile & Lake Nasser
4- *Petrocephalus bane* (Lacép.)		*		Upper Egypt Nile & Lake Nasser
5- *P. bovei* (Cuv. & Val.)			*	--
6- *Pollimyrus isidori* (Val.)		*		Upper Egypt Nile & Lake Nasser
7-*Gnathonemus cyprinoides* (L.)		*		Whole River Nile & Lake Nasser
8-*Mormyrus hasselquistii* Val.			*	--
9-*M. kannume* Forssk.	*			Allover the River Nile
10-*M. caschive* L.		*		Upper Egypt Nile & Lake Nasser
11-*M. niloticus* (Bl. Schn.)			*	--
12-*Hyperopisus bebe* (Lacép.)		*		Lake Nasser
Gymnarchidae				
13-*Gymnarchus niloticus* (Cuv.)		*		Lake Nasser
Osteoglossidae				
14-*Heterotis niloticus* (Cuv.)			*	--
Anguillidae				
15-*Anguilla anguilla* (L.)	*			Lower Egypt Nile & coastal lagoons
Clupeidae				
16-*Alosa fallax* (Lacép.)		*		Delta-Cairo seg. of River Nile.
Cyprinidae				
17-*Labeo niloticus* (Forssk.)	*			Along River Nile & L. Nasser
18-*L. horie* Heck.		*		Along River Nile & L. Nasser
19-*L. coubei* Rüpp.		*		Upper Egypt Nile & L. Nasser
20-*L. victorianus* Blgr.		*		Along River Nile & L. Nasser
21-*Garra dembeensis* (Rüpp.)		*		Lake Nasser
22-*Barbus bynni* (Forssk.)	*			Along River Nile & L. Nasser
23-*B. perince* Rüpp.	*			Along River Nile & L. Nasser
24-*B. neglectus* Blgr.		*		Upper Egypt Nile & L. Nasser

LIST OF FRESHWATER FISHES IN EGYPT, THEIR STATUS AND DISTRIBUTION

Species	Status			Distribution
	Common	Rare	Extinct	
25-*B. werneri* Blgr.		*		Upper Egypt Nile & L. Nasser
26-*B. anema* Blgr.		*		Upper Egypt Nile & L. Nasser
27-*Leptocypris niloticus* (Joann.)		*		Upper Egypt Nile & L. Nasser
28-*Raiamas loati* (Blgr.)		*		Upper Egypt Nile & L. Nasser
29-*Chelaethiops bibie* (Joann.)		*		Upper Egypt Nile & L. Nasser
Characidae				
30-*Hydrocynus forskalii* (Cuv.)	*			Allover River Nile & L. Nasser
31-*H. vittatus* (Castel.)		*		Lake Nasser
32-*H. brevis* (Gthr.)		*		Lake Nasser
33-*Alestes dentex* (L.)		*		Upper Egypt Nile & L. Nasser
34-*A. baremoze* (Joann.)		*		Upper Egypt Nile & L. Nasser
35-*Brycinus nurse* (Rüpp.)	*			Upper Egypt Nile & L. Nasser
36-*B. macrolepidotus* (Cuv. & Val.)			*	–
37-*Micralestes acutidens* (Peters)			*	–
38-*Ichthyoborus besse* (Joann.)			*	–
Distichodontidae				
39-*Distichodus niloticus* (L.)		*		Upper Egypt Nile & L. Nasser
40-*D. rostratus* (Gthr.)			*	–
41-*D. engycephalus* (Gthr.)			*	–
42-*Nannocharax niloticus*			*	–
Citharinidae				
43-*Citharinus citharus* (Geoffr.)		*		Upper Egypt Nile & L. Nasser
44-*C. latus* M. & T.		*		Upper Egypt Nile & L. Nasser
Bagridae				
45-*Bagrus bajad* (Forssk)	*			Whole River Nile & L. Nasser
46-*Bagrus docmak* (Forssk.)	*			Whole River Nile & L. Nasser
47- *Bagrus degeni* Blgr.		*		Lake Nasser (recorded in 1993)
48-*Chrysichthys auratus* (Geoffr.)	*			Whole River Nile & L. Nasser
49-*C. rueppelli* Blgr.		*		Whole River Nile & L. Nasser

LIST OF FRESHWATER FISHES IN EGYPT, THEIR STATUS AND DISTRIBUTION

Species	Status			Distribution
	Common	Rare	Extinct	
50-*Clarotes laticeps* (Rüpp.)		*		Whole River Nile
51-*Auchenoglanis biscutatus* (Geoffr.)		*		Lower Egypt Nile & L. Nasser
52-*A. occidentalis* (C. & V.)		*		Whole River Nile & L. Nasser
Schilbeidae				
53-*Schilbe (Eutropius) niloticus* (Rüpp.)		*		Whole River Nile & L. Nasser
54-*Schilbe (Schilbe) mystus* (L.)	*			Whole River Nile
55-*S. (S.) uranoscopus* Rüpp.		*		Upper Egypt Nile & L. Nasser
56-*Siluranodon auritus* Geoffr.		*		Whole River Nile
Clariidae				
57-*Clarias anguillaris* (L.)		*		Upper Egypt Nile & L. Nasser
58-*C. gariepinus* (Burch.)	*			Along River Nile & L. Nasser
59-*Heterobranchus bidorsalis* Geoffr.		*		Upper Egypt Nile & L. Nasser
60-*H. longifilis* Val.		*		Upper Egypt Nile & L. Nasser
Malapteruridae				
61- *Malapterurus electricus* (Gm.)		*		Upper Egypt Nile & L. Nasser
Mochokidae				
62-*Synodontis schall* (Bl. & Sch.)	*			Whole River Nile & L. Nasser
63-*S. serratus* Rüpp.		*		Whole River Nile & L. Nasser
64-*S. clarias* (L.)		*		Lower Egypt Nile & L. Nasser
65-*Brachysynodontis batensoda* (Rüpp.)			*	–
66-*Hemisynodontis* membranaceus (Geoff.)			*	–
67-*Mochocus niloticus* Joann.		*		Upper Egypt Nile & L. Nasser
68-*Chiloglanis niloticus* Blgr.		*		Upper Egypt Nile & L. Nasser
Cyprinodontidae				
69-*Aphanius fasciatus* (Val.)		*		Delta & Some coastal lakes
70-*Aplocheilichthys schoelleri* (Blgr.)			*	—

LIST OF FRESHWATER FISHES IN EGYPT, THEIR STATUS AND DISTRIBUTION

Species	Status			Distribution
	Common	Rare	Extinct	
Centropomidae				
71-*Lates (Lates) niloticus* (L.)	*			Whole River Nile & L. Nasser
Cichlidae				
72-*Hemichromis bimaculatus* Gill.		*		Delta & coastal lakes
73-*Haplochromis bloyeti* (Sauv.)		*		Delta & coastal lakes
74-*Tilapia zillii* (Gerv.)	*			River Nile, costal lakes & L.Qarun
75-*Oreochromis niloticus* (L.)	*			River Nile, coastal lakes & L.Nasser
76-*Oreochromis aureus* (Steind.)	*			Coastal lakes, Delta, Ismalia C.
77-*Sarotherodon galilaeus* (Art.)	*			River Nile, coastal lakes & L. Nasser
Moronidae				
78-*Dicentrarchus labrax* (L.)		*		Delta & some coastal lakes
79-*D. punctatus* (Bloch.)		*		Delta & some coastal lakes
Mugilidae				
80-*Mugil cephalus* L.	*			Lower Nile & coastal lakes
81-*Liza ramada* (Risso)	*			Lower Nile & coastal lakes
82-*Liza aurata* (Risso)	*			Lower Nile & coastal lakes
Eleotridae				
83-*Eleotris nanus* Blgr.			*	—
Atherinidae				
84-*Atherina (hepsetia) boyeri* Risso	*			Coastal lakes
Tetrodontidae				
85-*Tetrodon linneatus* L.		*		Upper Egypt Nile & L. Nasser
Total number of species	22	49	14	

Extinct : not recorded from Egyptian Nile waters during the last 30 years.
Rare : species not common and rarely caught, further knowledge is needed on basis of extensive field studies.

Mastacembelidae
86 Aethiomastacembelus frenatus (Blg.)

RED LIST
OF THREATEND FRESHWATER FISHES IN EGYPT
[Given in the same order (numbers) as in text]

Fig. No.	Latin name	Fig. No.	Latin name
1	***Protopterus aethiopicus*** **Heckel.**	32	***Hydrocynus brevis*** **(Gthr.)**
2	***Polypterus bichir*** **Geoffr.**	39	***Distichodus niloticus*** **(L.)**
3	***Mormyrops anguilloides*** **L.**	43	***Citharinus citharus*** **(Geoffr.)**
4	***Petrocephalus bane*** **(Lacép.)**	44	***Citharinus latus*** **M. & T.**
6	***Pollimyrus isidori*** **(Val.)**	49	***Chrysichthys rueppelli*** **Blgr.**
7	***Gnathonemus cyprinoides*** **(L.)**	50	***Clarotes laticeps*** **(Rüpp.)**
10	***Mormyrus caschive*** **L.**	51	***Auchenoglanis biscutatus*** **(Geoffr.)**
12	***Hyperopisus bebe*** **(Lacép.)**	52	***Auchenoglanis occidentalis*** **(C. & V.)**
13	***Gymnarchus niloticus*** **(Cuv.)**	55	***Schilbe (S.) uranoscopus*** **Rüpp.**
16	***Alosa fallax*** **(Lacép.)**	56	***Siluranodon auritus*** **Geoffr.**
18	***Labeo horie*** **Heck.**	59	***Heterobranchus bidorsalis*** **Geoffr.**
19	***Labeo coubei*** **Rüpp.**	60	***Heterobranchus longifilis*** **Val.**
21	***Garra dembeensis*** **(Rüpp.)**	63	***Synodontis serratus*** **Rüpp.**
24	***Barbus neglectus*** **Blgr.**	67	***Mochocus niloticus*** **Joann.**
25	***Barbus werneri*** **Blgr.**	68	***Chiloglanis niloticus*** **Blgr.**
26	***Barbus anema*** **Blgr.**	69	***Aphanius fasciatus*** **(Val.)**
27	***Leptocypris niloticus*** **(Joann.)**	73	***Haplochromis bloyeti*** **(Sauv.).**
28	***Raiamas loati*** **(Blgr.)**	85	***Tetrodon linneatus*** **L.**
31	***Hydrocynus vittatus*** **(Castel.)**		

INTRODUCED FRESHWATER FISHES OF EGYPT

Scientific names	Common names		Origin
	English	Arabic	
Cyprinidae			
86. *Cyprinus carpio* L.	Common or Mirror carp	مبروك عـــــادى	Introduced from Indonesia in 1934
87. *Hypophthalmichthys molitrix* (Val.)	Silver carp	مبروك فضـــى	Introduced from Japan in 1962
88. *Ctenopharyngodon idella* (C. & V.)	Grass carp	مبروك الحشـــــائش	Introduced from Hong Kong in 1968
89. *Aristichthys nobilis* Rich.	Bighead carp	مبروك كبير الرأس	Introduced from Hong Kong in 1980
90. *Mylopharyngodon piceus* (Rich.)	Black or snail carp	مبروك أســـــود	Introduced from Israel in 1993
Cichlidae			
91. *Oreochromis (mossambicus) Korogwe* (Peters)	Mozambique tilapia	بلطى موزمبيقى	Introduced from Thailand in 1954
92. *Oreochromis spilurus* Gthr.	Tilapia	بلطى سبيلورس	Introduced from Kenya in 1986
93. (Red tilapia)	Red tilapia	بلطى أحمـــــر	Introduced from France in 1984 Introduced from Bahamass in1993
Poecilidae			
94. *Gambusia affinis* (B. & G.)	Mosquito-fish	آكـل الناموس - جامبوزيا	

Order LEPIDOSIRENIFORMES
African Lungfishes and South American Lungfishes

Pectoral and pelvic fins long and thread-like. Teeth in form of horny plates.

FAMILY : PROTOPTERIDAE

African Lungfishes

Lungfishes are related to the coelacanths and possibly represent the nearest living relatives of the ancestor of all four-legged vertebrates.

Genus : *Protopterus* Owen, 1837

This African genus includes four species, of which one occurs in Egypt. It has a distinctive elongated tapered body and filamentous pectoral and pelvic fins.

1. *Protopterus aethiopicus* Heckel, 1851

Synonyms : *Lepidosiren arnaudii* Castelnau, 1855,
Lepidosiren annectens Gray, 1860,
Protopterus annectens Hartmann, 1865.

Common Name :

English : African Lungfish

Arabic : دبيب الحـــوت (Dabib Elhoot)

Status : Rare

Distribution :

Local : Very rare in Lake Nasser (Latif, 1974).

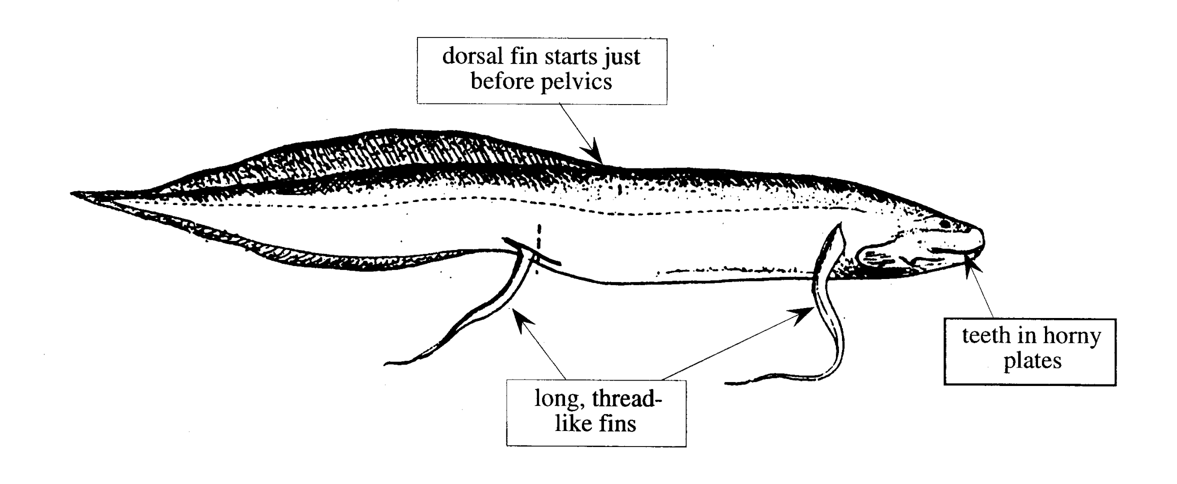
World : White Nile, basins of Lakes Victoria and Tanganyika and West Africa.

Biology and Ecology :

- -In open lakes and marginal swamps.
- -It burrows in the mud during the dry season to form a cocoon with an air channel extending to the surface of the soil.
- -Breathing by both gills and lungs.
- -Omnivorous, feeds mainly on fish, molluscs, worms and aquatic plants.
- -Maximum length 2 m.

Colour : greyish brown with dark brown spots and blotches which may be prominent or faint.

Economic Importance : unmarketable.



1- ***Protopterus aethiopicus*, Heckel.** **دبيب الحوت**

Order POLYPTERIFORMES

Bichirs

Scales thick and bony. Dorsal fin divided into a series of separate finlets, each with a spine and several rays.

FAMILY : POLYPTERIDAE

Bichirs

Genus : ***Polypterus* Lacepede, 1803**

2. *Polypterus bichir*, Geoffroy, 1802

Synonyms : none

Common Name :

Englis : Bichir

Arabic : أبو بشــير (Abu-Bichir)

Status : Rare.

Distribution :

Local : This species used to occur along the whole River Nile; from Damietta Branch to Aswan, now restricted to Lake Nasser.

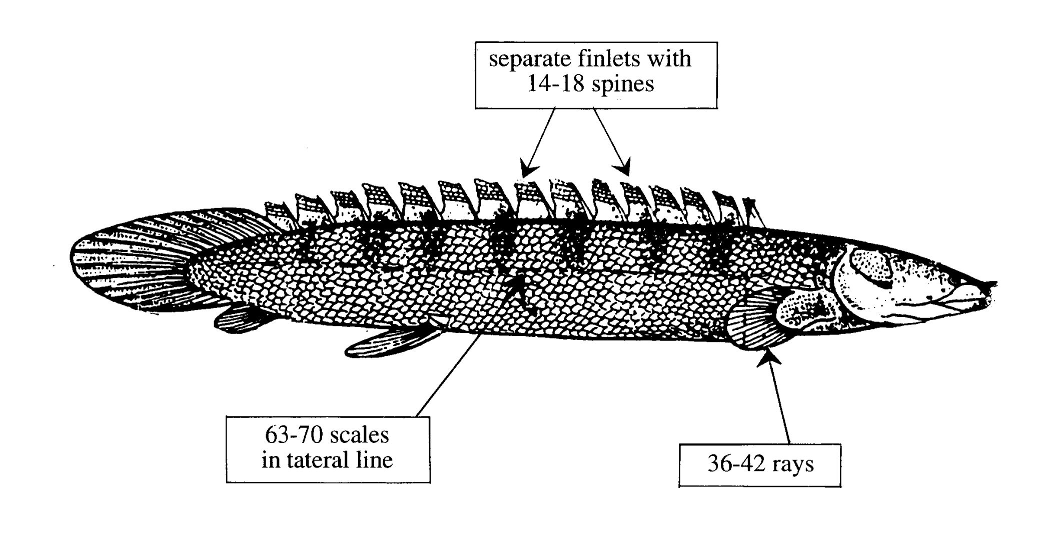
World : White Nile, West Africa (Senegal, Nigeria), Chad.

Biology and Ecology :

-It is a bottom feeder and predates on siluroids, eels and tilapias.
-It spawns in July, August and September.
-It moves with snake-like movement.
-Young with external gills.
-Length: up to 75 cm.

Colour : greyish or greenish olive above, belly is lemon-yellow; a few scattered black spots sometimes present on the body.

Economic Importance : unmarketable.



2- *Polypterus bichir* Geoffr. أبو بشير

Order OSTEOGLOSSIFORMES
Elephantfishes and Bonytongues

Head smooth and fleshy. Mouth small and distinctive, usually on a fleshy snout. Eye embedded, with no free border . No spines in fins. Caudal peduncle long and narrow. Caudal fin forked with rounded lobes.Body with small scales.

FAMILY : MORMYRIDAE

Elephantfishes

Mormyrids have soft bodies, and snout often exended into a proboscis. The family includes 18 genera and 200 species distributed throughout tropical Africa including the Nile.

Genus : ***Mormyrops*** Müeller, 1843

About 20 species distributed in tropical Africa, one in Egypt. They are large fishes with elongate head and body.

3.*Mormyrops anguilloides*, Linnaeus, 1758

Synonyms : *Mormyrops (Mormyrops) anguilloides anguilloids*, Linnaeus 1758,
Mormyrus dendera, Lacepede, 1803,
Mormyrus anguilloides, Geoffroy, 1827,
Marcusenius anguilloides, Gill, 1862.

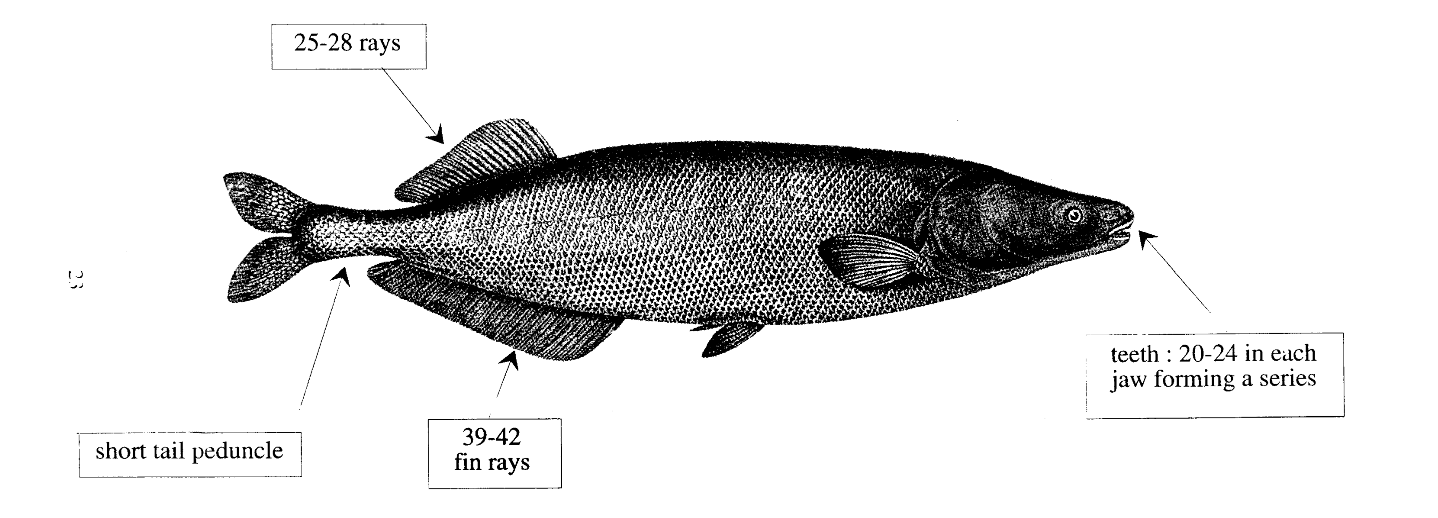
Common Name :
English : Cornish Jack - Roof-bottlenose - Taraza
Arabic : قموم ثعباني – جمهر
(Gamhar - Kamum thobani)

Status : Rare.

Distribution :
Local : Upper Nile and Lake Nasser. This species used to be present in the Delta, but disappeared after the construction of the High Dam.
World : Rivers of East and West Africa and Lake Chad.

Biology and Ecology :
-The fish is found in muddy bottoms among aquatic weeds.
-Food consists chiefly of small fishes, crustaceans, molluscs and insects.
-Breeds in summer and mature females carry 25000 or more eggs.
-Electric organ in the caudal muscles; weak discharge.
-Length : up to 33 cm.

Colour : deep olive brown on the back and white on the belly.
Economic Importance : unmarketable.



3- *Mormyrops anguilloides* L. قموم ثعبانى

Genus : ***Petrocephalus*** Marcusen, 1854

About 20 species are distributed throughout Afrotropical region, two in Egypt. Defined on characteristic skeletal features and unique electroreceptors "rosettes" around the eyes that are not found in other mormyrids. Snout rounded and mouth below eye.

4.*Petrocephalus bane* (Lacépède, 1803)

Synonyms : - *Mormyrus bane*, Lacépède, 1803,
- *Mormyrus cyprinoides*, Geoffroy, 1827,
- *Mormyrus dequesne*, Cuvier & Valenciennes, 1846,
- *Mormyrus ehrenbergii*, Cuvier & Valenciennes, 1846,
- *Petrocephalus ehrenbergii*, Marcusen, 1854.

Common Name :

English : Churchill - Nile Pumphret

Arabic : بونه بانى - حجر - أرمنيا

(Bona banieh - Hagar - Armnia)

Status : Rare, used to be caught from the Delta, Cairo and Giza (Boulenger, 1907).

Distribution :

Local : Upper Nile and Lake Nasser.

World : Blue Nile, White Nile, Chad basin, Upper Niger, Senegal and Gambia Rivers.

Biology and Ecology :

-Food consists mainly of algae, plankton, small fishes and chironomid larvae.

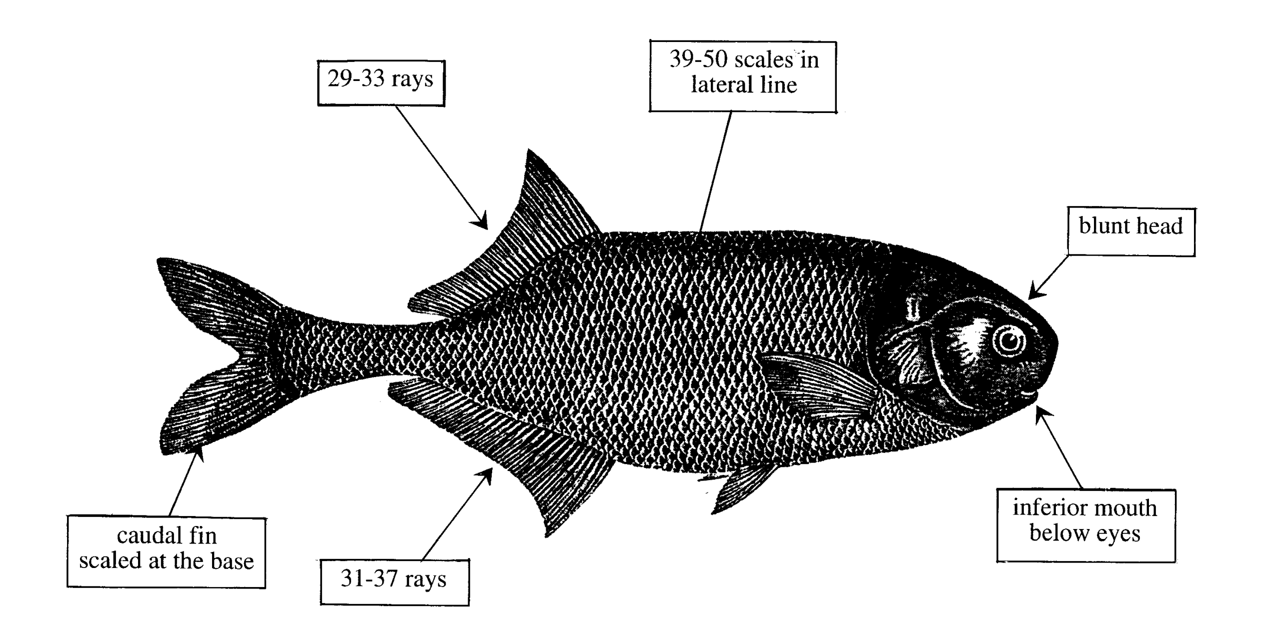
-Breeding takes place at the beginning of September.

-Electric organ in the caudal muscles; weak discharge.

-Average length 20 cm.

Colour : silvery greyish on the back, extremity of anterior dorsal rays brownish or blackish..

Economic Importance : unmarketable.



4– *Petrocephalus bane* (Lacép.) أرمنيا – حجر

5. *Petrocephalus bovei* (Cuvier & Valenciennes, 1846)

Synonyms : *Mormyrus bovei* Cuvier & Valenciennes, 1846

Common Name :

English : Bonytongue

Arabic : بونـــه بوفى (Bona bufi)

Status : Extinct, previously recorded by Boulenger (1907) in Rosetta branch and Lower Nile.

Distribution :

Local : Extinct.

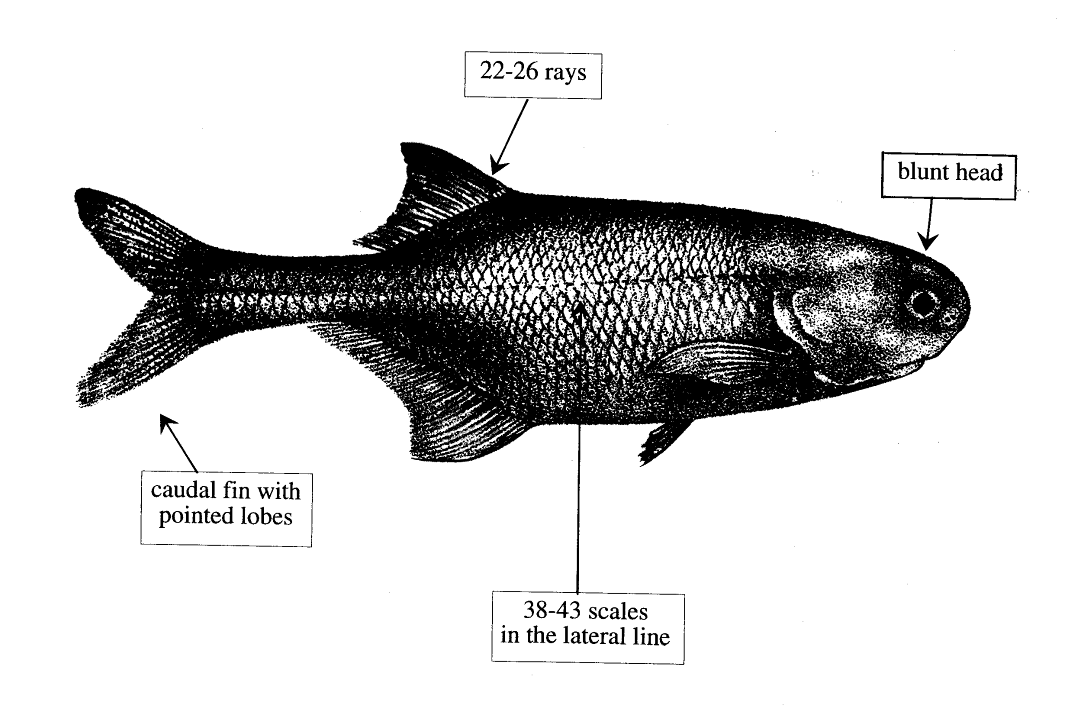
World : Senegal and Gambia.

Biology and Ecology :

- Feeds on chironomid and other insect larvae.
- Length : 8-10 cm.

Colour : silver and darker at the dorsal side, fins white.

Economic Importance : a potentially attractive aquarium species.



5- *Petrocephalus bovei* (Cuv. & Val.) بونـــه بوفی

Genus : ***Pollimyrus*** **Taverne, 1971**

Defined mainly on skeletal characters. About 19 species in tropical Africa. One species in Egypt

6.*Pollimyrus isidori* (Valenciennes, 1846)

Synonyms : *Mormyrus isidori* Cuvier & Valenciennes, 1846,
Petrocephalus isidori Marcusen, 1864,
Marcusenius isiddori Boulenger, 1898.

Common Name :
English : Hand Hold Fish
Arabic: أنومــه إيزيدور (Anoma Isidor)

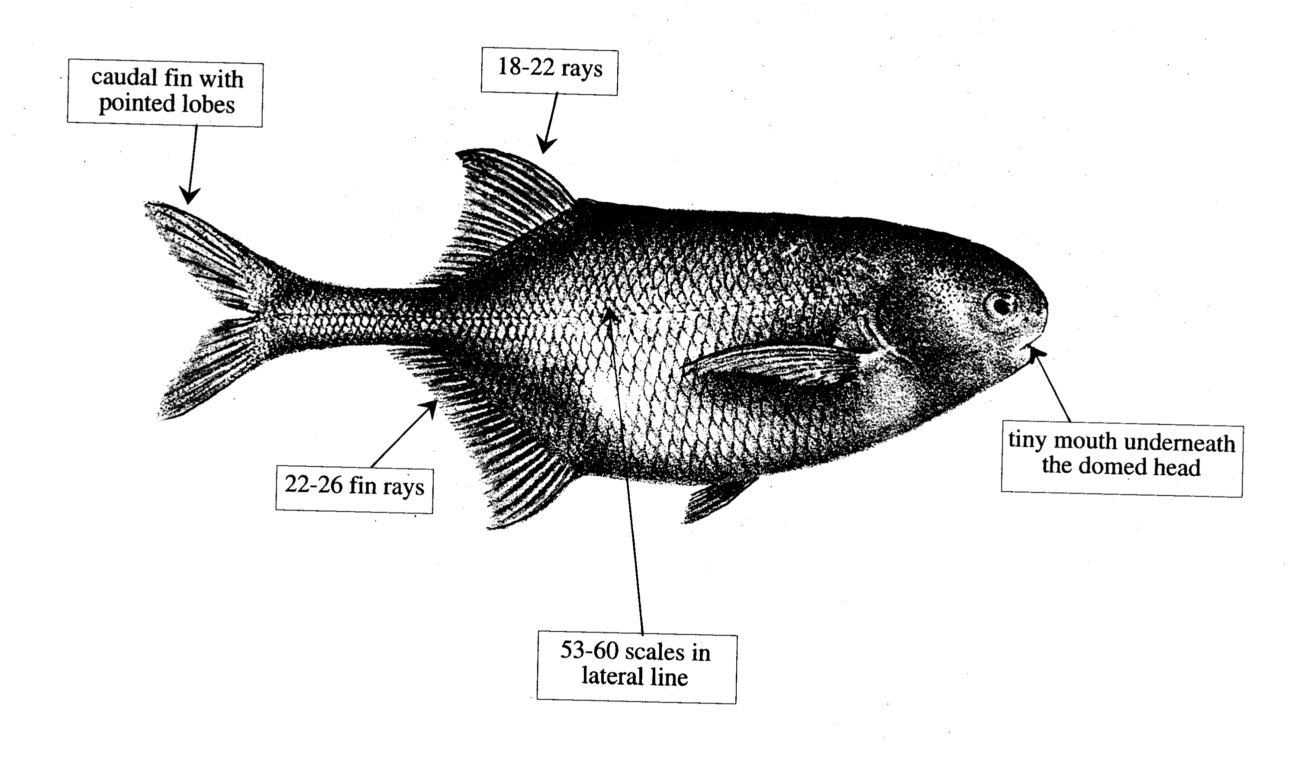
Status : Rare Frequent,

Distribution :
Local : Upper Nile and Lake Nasser.
World : River Nile basin, Lake Nubia, White Nile.

Biology and Ecology :
- -Lives in quiet water of rivers, moving on to flood plains to breed.
- -The fish spends most of its time suspended in mid-water but occasionally it will lie on the muddy bottom.
- -Its food consists mainly of annelid worms, arthropods and vegetation.
- -Length : maximum 10 cm.

Colour : silvery body with metallic grey patches on the head along the dorsal crest and mid lateral line, pinkish flush on head.

Economic Importance : marketable when caught.



6- *Pollimyrus isidori* (Val.) أنومـــه إيزيدور

Genus : ***Gnathonemus* Gill, 1863**

A long cylindrical fleshy appendage on chin. one species in Egypt.

7.*Gnathonemus cyprinoides*, (Linnaeus, 1764)

Synonyms : *Marcusenius cyprinoides*, (Linnaeus, 1758),
Mormyrus cyprinoides, Linnaeus, 1764,
Mormyrus salahie, Lacepede, 1803,
Mormyrus labiatus, Geoffroy, 1827,
Mormyrops cyprinoides, Marcusen, 1854,
Mormyrops labiatus, Marcusen, 1864.

Common Name :

English : Thick-Lipped Fish

Arabic : أنومه – أم شفه شفافـــة – أم شفيفـه

(Anoma, Umma-Shafa Shafafah - Umm-Shififah)

Status : Rare.

Distribution :

Local : Whole River Nile and Lake Nasser.

World : Basin of Chad, Niger, Upper Congo and Bahr-el-Jebel.

Biology and Ecology :

-Its food consists mainly of aquatic insects, crustaceans, annelid worms and vegetable matter.

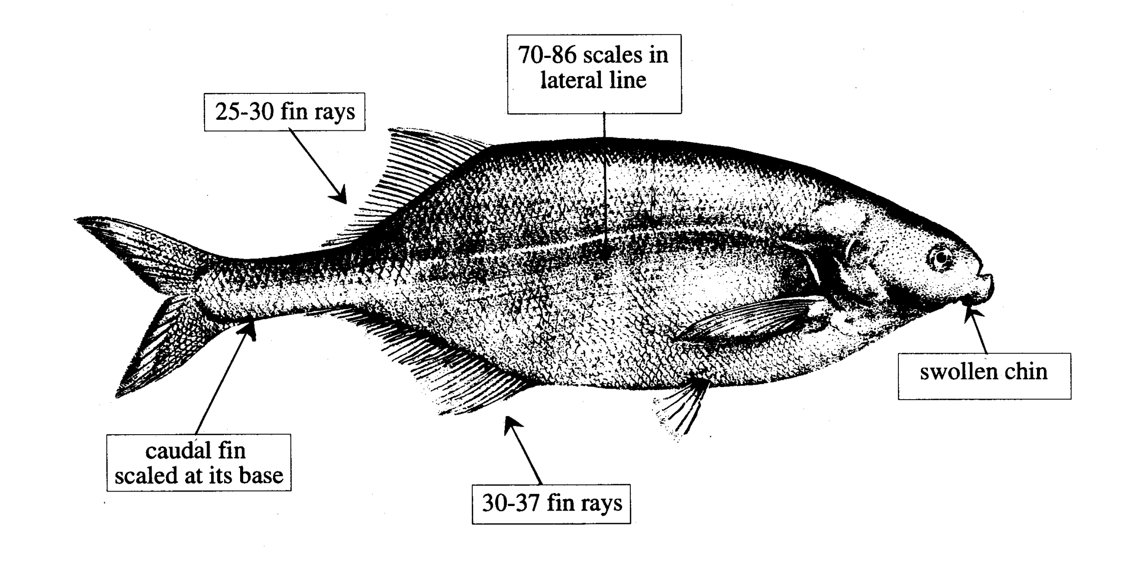
-Nocturnal, mostly bottom living.

-Electric organ in the caudal muscle, weak discharge.

-Length : does not exceed 30 cm.

Colour : black bronzy green on back, white silvery on the lower side, with pinkish flush at the base of fins.

Economic Importance : marketable when caught.



7-*Gnathonemus cyprinoides* (L.) أنومه - أم شفه شفافـــة

Genus : *Mormyrus* Linnaeus, 1758

About 20 species are distributed throughout tropical Africa, four in Egypt. Characterized by the long dorsal fin and the relatively short anal fin. Extended snout and elongate body.

8.*Mormyrus hasselquistii* Cuvier & Valenciennes 1846

Synonyms : *Mormyrus herse* Lacépède, 1803,
Mormyrus caschive Geoffroy, 1827.

Common Name :
English : Elephant fish
Arabic: أنومـــه هاسلكويست (Anomah Hasselquist)

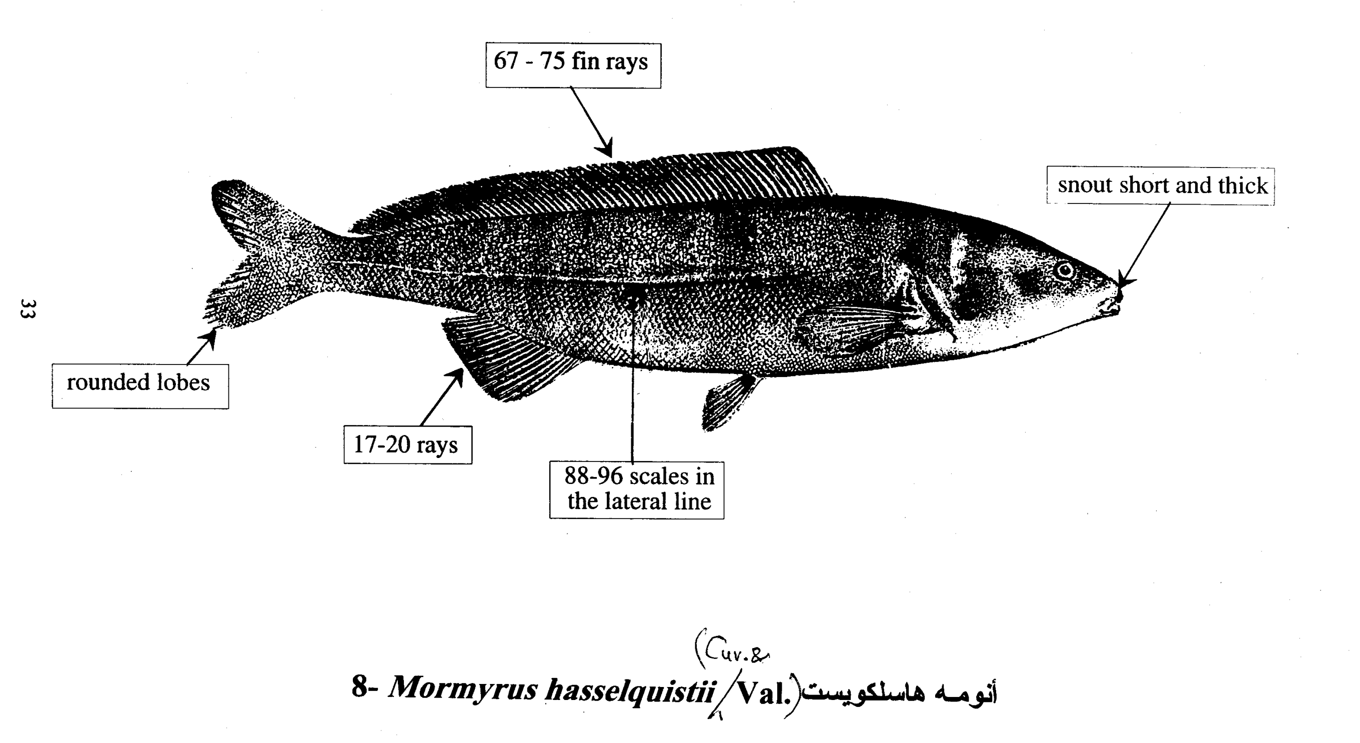
Status : Extinct, recorded by Boulenger (1907) from Lower Nile.

Distribution :
Local : Extinct.
World : White Nile and Bahr-el-Gebel.

Biology and Ecology :
- Maximum length 35 cm.

Colour : upper parts dark grey with gold and pink reflections; lower parts whitish with gold reflections; fins mostly greyish, very slightly tinged with yellow.

Economic Importance : not known.



8- *Mormyrus hasselquistii* (Cuv. & Val.) أنومـه هاسلكويست

9. *Mormyrus kannume* Forsskål, 1775

Synonyms : *Mormyrus oxyrhynchus* Geoffroy, 1827,
Scrophicephalus kannume Rüppell, 1852,
Mormyrus hildebrandi Peters, 1882.

Common Name :
English : Bottlenose
Arabic: أنومـــه أم بـــويز (Anomah Umm Baouez)

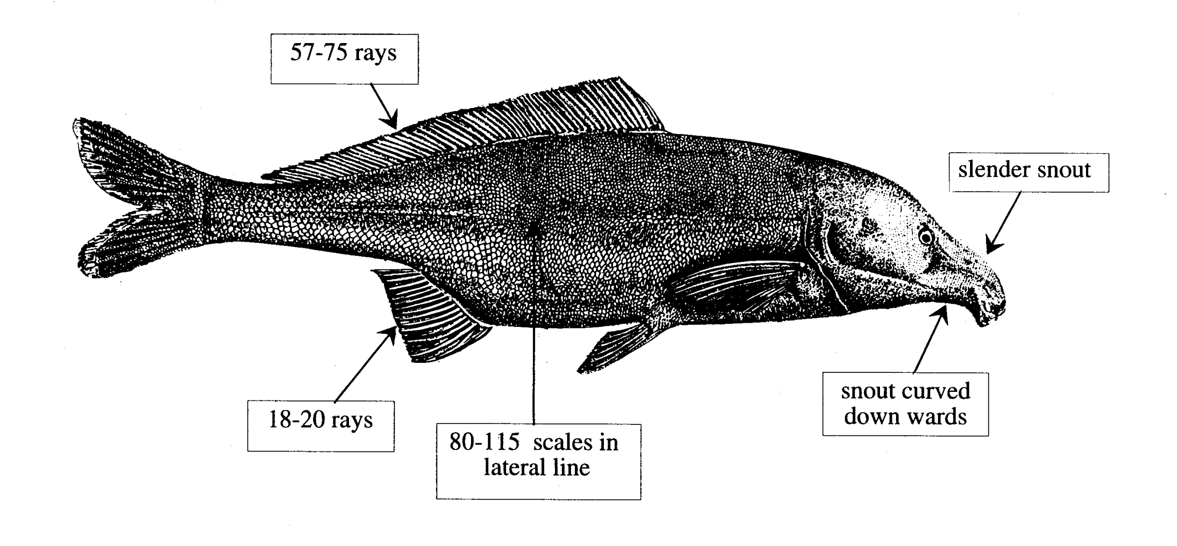
Status : Common, but numbers are decreasing in recent years.

Distribution :
Local : Allover the River Nile.
World: Blue Nile and Lake Victoria, Lake Kyoga; Lake Albert, Lakes Edward and George.

Biology and Ecology :
-It has a curious habit of swimming backwards.
-It spends the day on the bottom, but after nightfall it becomes very active, searching for food.
-Associated with rocks, nocturnal.
-It is commonly caught in rapidly-flowing water.
-It feeds on insects, particularly chironomid larvae, annelid worms and bottom animals.
-Males outnumber females in the catch.
-Gonads are mature in spring and summer and only the left ovary or testis is present.
-Well grown fish can give quite an electrical shock.
-Maximum length 1 m.

Colour : brownish or olive above, white beneath.

Economic Importance : caught in fair quantities in Upper Egypt.



9- *Mormyrus kannume* Forssk. أنومـه - أم بـويز

10. *Mormyrus caschive* Linnaeus, 1758

Synonyms : *Mormyrus longipinnis* Rüppell, 1832,
Scrophicephalus longipinnis Swainson, 1838,
Mormyrus geoffroyi Gunther, 1866,
Mormyrus longirostris Boulenger, 1898.

Common Name :

English : Elephant snout or Eastern Bottlenose

Arabic: قنومة قشوة – كاشيف – بـوذا

(Boza - Kashif - Kanomeh Kashwah)

Status : Rare.

Distribution :

Local : Lake Nasser and Upper Nile.

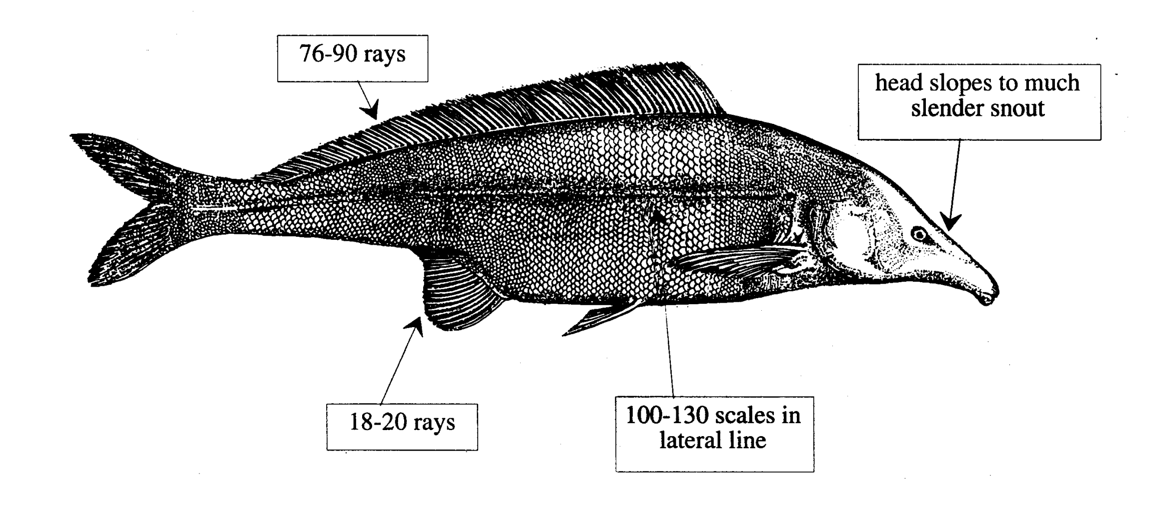
World : Restricted to the River Nile, Khartoum, White Nile, Lake Nubia, Lake Chad, Congo, Uganda ; Lakes Edward, George and Albert, Albert and Murchison Niles near delta.

Biology and Ecology :

-The food consists mainly of aquatic insects, particulary chironomid larvae and small shrimps, worms and vegetation.
-Active mainly at night.
-Favours quiet deep water with a soft muddy bottom.
-Breeds in summer
-Maximum length 75 cm.

Colour : dark bronze above, lighter below.

Economic Importance : marketable when caught.



10- *Mormyrus caschive* L. قنومة قشوة - كاشيف

11. *Mormyrus niloticus* (Bloch & Schneider, 1801)

Synonyms : *Centriscus niloticus* Bloch, 1801,
Mormyrus geoffroyi Cuvier & Valenciennes, 1846.

Common Name :
English : Elephant snout
Arabic: أنومــه نيلية (Anomah Nilieh)

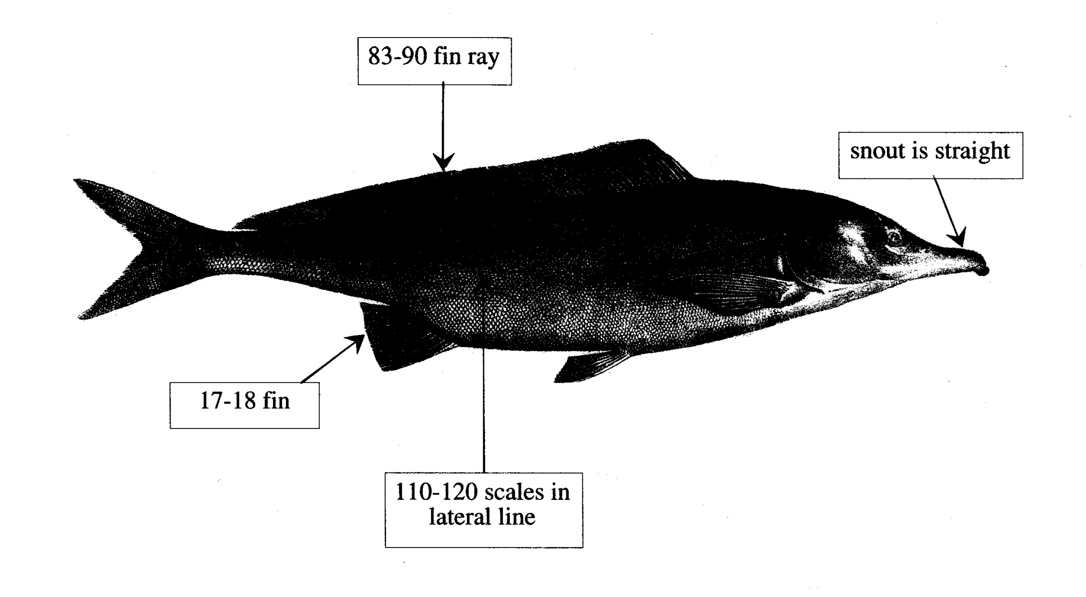
Status : Extinct, used to be distributed along the whole River Nile.

Distribution :
Local : Extinct.
World : River Nile system and Uganda, Lake Albert basin.

Biology and Ecology :
-Distinguished from *M. caschive* by its straighter snout which is prolonged in the axis of the body, i.e. not curved ventrally.
-Length : 35-45 cm.

Colour : almost similar to *M. caschive.*

Economic Importance : not known



11- *Mormyrus niloticus* (Bl. Schn.) أنومـه نيلية

Genus : ***Hyperopisus* Gill , 1863**

Represented only by one species in Egypt. Characterized by the long anal fin and the relatively short dorsal fin.

12.*Hyperopisus bebe* (Lacépède, 1803)

Synonyms : *Mormyrus bebe* Lacépède, 1803,
Mormyrus dorsalis Geoffroy, 1827,
Phagrus dorsalis Marcusen, 1864,
Hyperopisus dorsalis Gunther, 1866.

Common Name :
Arabic: قلميـــة – بابيـــة – ســـاويا
(Kalamia - Babie - Sawia)

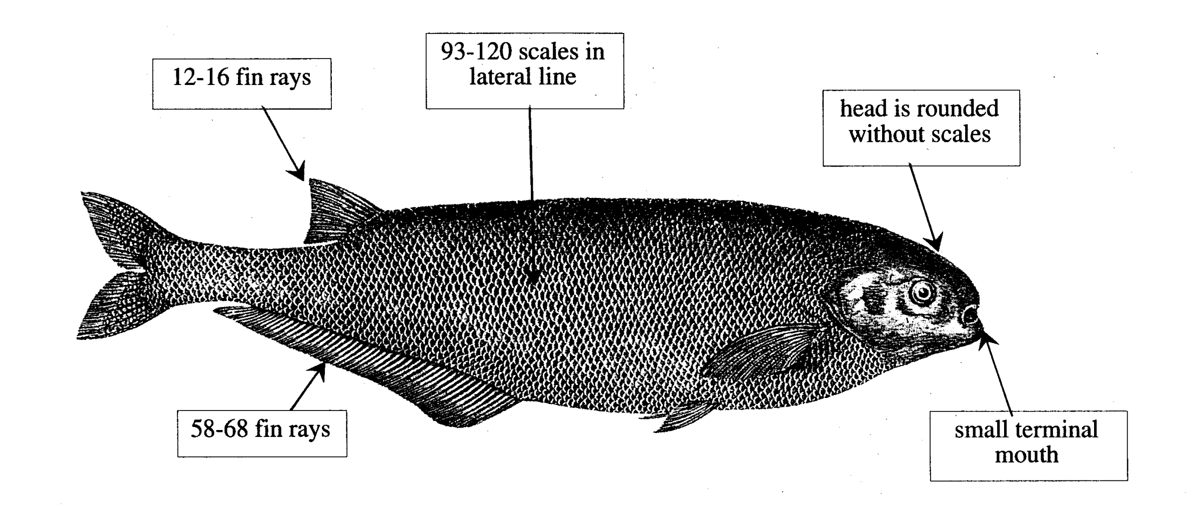
Status : Rare.

Distribution :
Local : Lake Nasser only, previously caught from the entire Nile System in Egypt from Delta to Aswan.
World : White Nile and Blue Nile, Chad, Senegal and Niger basins.

Biology and Ecology :
-It prefers aquatic weed habitats.
-Food consists mainly of phytoplankton. It also feeds on molluscs and aquatic insects.
-Length : to 50 cm.

Colour : top parts of body deep olive, lower parts white.

Economic Importance : marketable when caught.



12- ***Hyperopisus bebe*** **(Lacép.) قلمية - بابية**

FAMILY : GYMNARCHIDAE

Genus : ***Gymnarchus* Cuvier, 1829**

Represented only by one species in Egypt. Characterised by the eel-like body, with a long dorsal fin and relatively long anal fin.

13.*Gymnarchus niloticus* Cuvier, 1829

Synonyms : none

Common Name :

English : Freshwater Rat-Tail

Arabic: ريـــــه نيليـــة – جرفـــار (Raiah Nilieh - Gerfar)

Status : Rare.

Distribution :

Local : Lake Nasser.

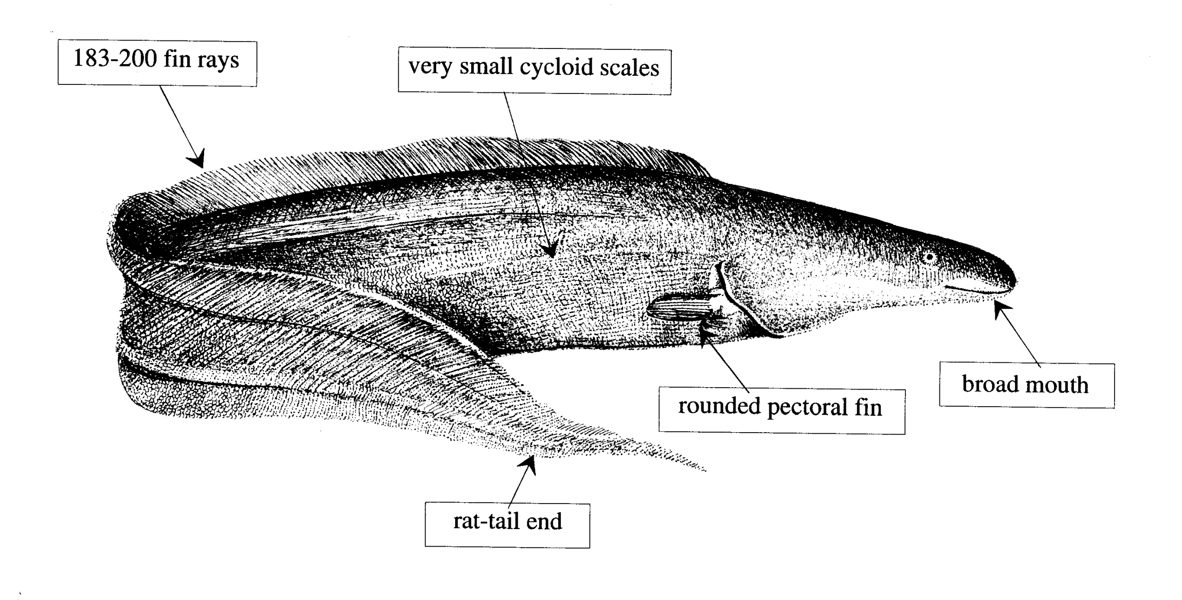
World : White Nile, Senegal, Niger and Lake Chad.

Biology and Ecology :

- -The fish is active during night, feeding on small fish, frogs, snails and aquatic insects. During the day it hides in holes or close to the roots of water plants.
- -It propels itself rapidly through the water by the action of its dorsal fin.
- -Females deposit their eggs in floating weedy nests. Larvae with external gill filaments and the yolk sac is a long cylindrical bag.
- -Anal, ventral and caudal fins are absent. Scales are very small and cycloid.
- -Body slimy.
- -Electric organ in the caudal muscles, week discharge of about 0.03 volts.
- -Length : to 110 cm.

Colour : deep olive brown, shading to nearly black on the back.

Economic Importance : marketable when caught.



13- ***Gymnarchus niloticus*** **(Cuv.) ريــه نيلية**

FAMILY : OSTEOGLOSSIDAE

Genus : ***Heterotis*** **Ehrenberg, 1836.**

Represented only by one species in Egypt. Characterised by large scales, long anal fin and rounded tail fin.

14.*Heterotis niloticus* (Cuvier,1829)

Synonyms : *Sudis niloticus* Cuvier, 1829,
Sudis adansonii Cuvier, 1830,
Heterotis ehrenbergii Cuvier & Valenciennes, 1846,
Heterotis ehrenbergii Hyrtl, 1854.

Common Name :
English : Thick-Skinned Fish
Arabic : نواق نيـلى – جـرافش (Nawak Nili - Grafsh)

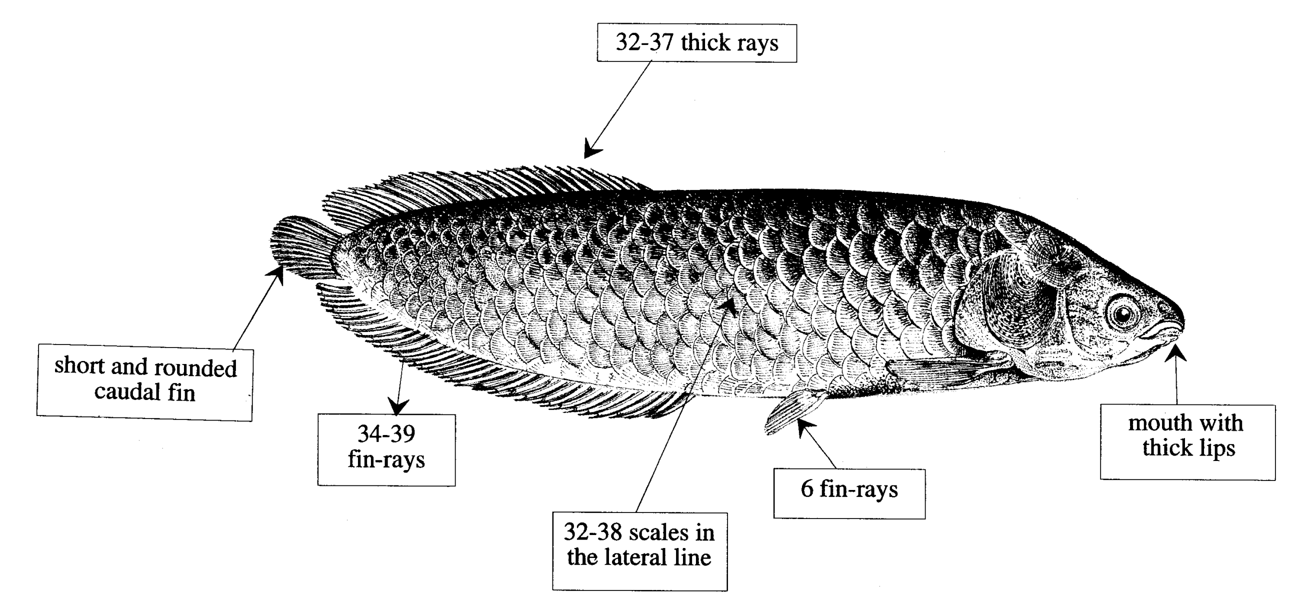
Status : Extinct, used to be caught from Upper Nile (Boulenger, 1907).

Distribution :
Local : Extinct
World : Khartoum, White Nile, Lake Chad, Senegal, Gambia and the Niger.

Biology and Ecology :
-It prefers aquatic weed habitats, especially swamps.
-Bottom feeder specially on arthropods, molluscs, chironomid larvae, vegetable debris and sometimes nematodes.
-Females deposit eggs in enormous nests, measuring 4 feet in diameter.
-The fish has a strong musky odour.
-Length : to 80 cm.

Colour : head greenish, dorsal side dusty reddish, ventral side red, fins red, eye iris orange in colour.

Economic Importance : not known.



14- *Heterotis niloticus* (Cuv.) نواق نيلى جرافش

Order **ANGUILLIFORMES**

Eels

Body snake-like. Pelvic fin absent. A single narrow gill opening on each side.

FAMILY : ANGUILLIDAE

Freshwater eels

Body with very small scales embedded in skin. Dorsal, caudal and anal fins continuous around tail. No spines in fins.

Genus : ***Anguilla*** Schrank, 1798

The family comprises a single genus (*Anguilla*) of 16 species of freshwater eels; one only in Egypt. They lack pelvic fins.

15.*Anguilla anguilla* (Linnaeus, 1758)

Synonyms :

Muraena anguilla **Linnaeus, 1766,**	***Anguilla vulgaris*** **Shaw, 1803,**
Anguilla acutirostris **Risso, 1826,**	***Anguilla latirostris*** **Risso, 1826,**
Anguilla acutirostris **Risso, 1826,**	***Anguilla fluviatilis*** **Anslijn, 1828,**
Muraena oxyrhina **Ekström, 1835,**	***Muraena platyrhina*** **Ekström, 1835,**
Anguilla cloacina **Bonaparte 1846,**	***Anguilla migratoria*** **Kröyer, 1849,**
Anguilla aegyptiaca, **Kaup 1856,**	***Anguilla nilotica*** **Kaup 1856.**

Common Name :

English : European eel

Arabic : ثعبــان السمك - حنــش - أنكليس نيلي

(Thobban Elsamak - Hanash - Anklees Nili).

Status : Common.

Distribution :

Local : Along the River Nile especially the Delta region and coastal lagoons.

World : Atlantic coasts of Morocco and Europe; northwards to British coasts, Ireland and Norway, also entering Mediterranean and Black Sea and Sea of Azov; southwards to Canaries and African coast at aboutt 25°N.

Biology and Ecology :

-Catadromous; females deposit eggs in Sargasso Sea, then larvae migrate into River Nile through Delta as glass eel.

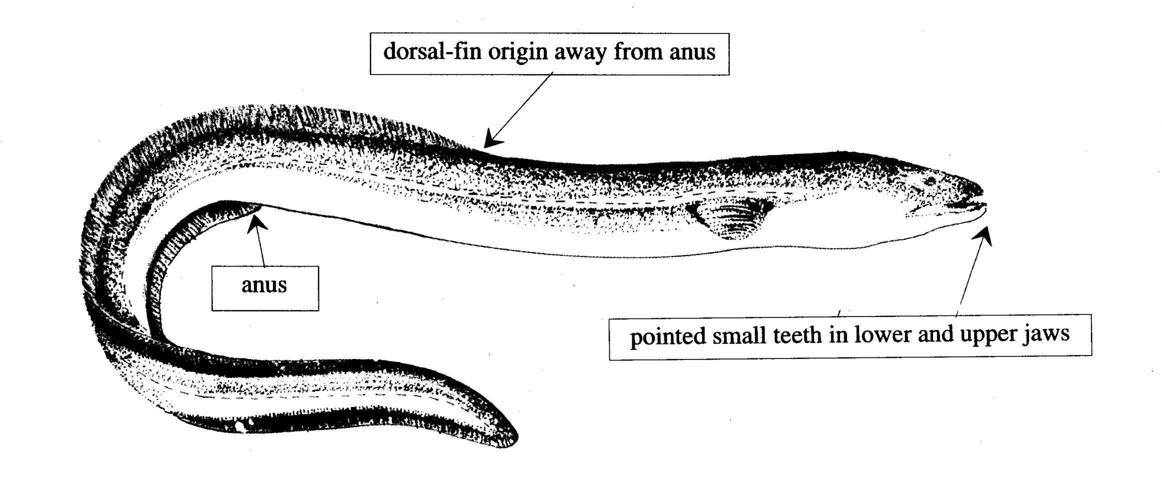
-Mature silver eels begin downstream spawning migration usually from late spring to winter and mainly in dark, moonless stormy nights, at this stage eyes become enlarged, the snout becomes narrower and more pointed.

-Food : insects and fishes. It ceases feeding on spawning migration.

-Length : to over 1 m (females), 51 cm (males).

Colour : silver or yellowish with a white belly.

Economic Importance : well marketable. It contributed about 0.3 % of the total Nile catch (193 tons) in 1996.



15- *Anguilla anguilla* (L.) ثعبان السمك - حنش

Order CLUPEIFORMES
Herrings and Anchovies
Jaws toothed. 5 to 20 branchiostegals. No adipose fin. Often the chest scales are keeled. Pelvic fins abdominal.

FAMILY :CLUPEIDAE

Herrings
Although most of them are marine, there are about 20 genera and nearly 40 species in African continental waters, including one species in Egypt.

Genus : ***Alosa*** **Linck 1790)**

16.*Alosa fallax* (Lacépède 1803)

Synonyms : *Clupea alosa* Linnaeus, 1762,
Clupea sprattus Sonnini, 1799,
Clupea nilotica Geoffroy, 1827,
Clupea finta (Cuvier, 1829),
Alosa finta Rüppell, 1829,
Alausa vulgaris Cuvier & Valenciennes, 1847.

Common Name :
English : Twaite shad
Arabic: رنجـــة الصابوغـــة – ســـردين
(Renget El Sabawgha - Sardine)

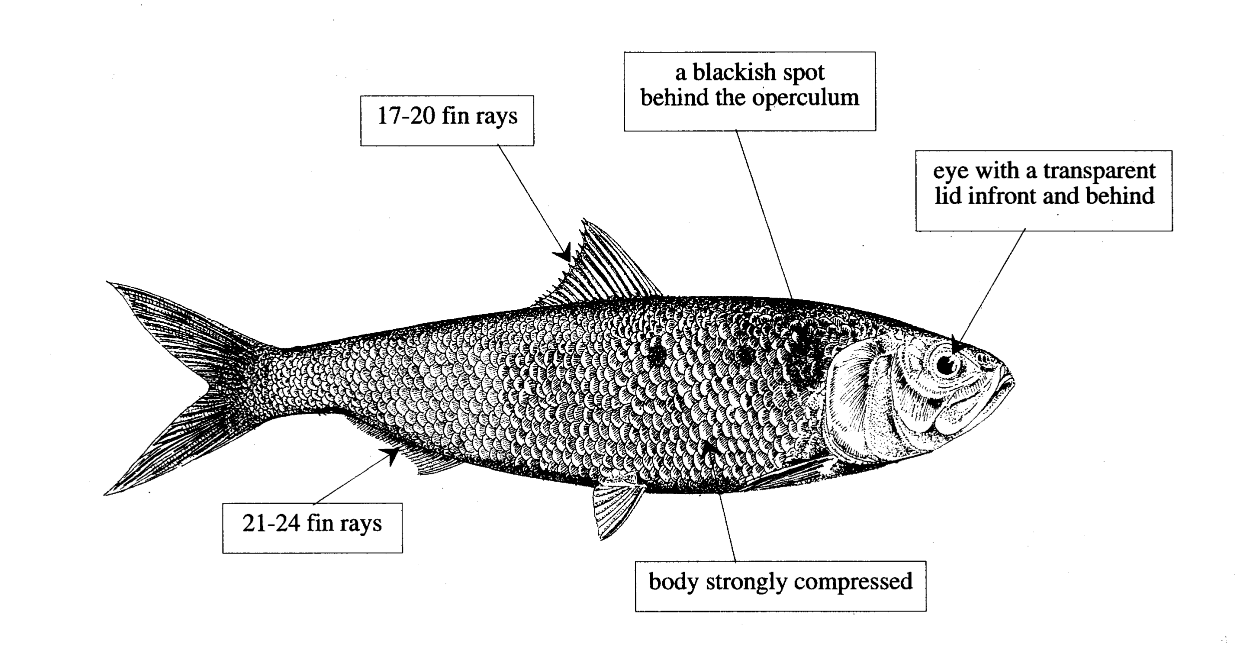
Status : very rare

Distribution :
Local : It is originally a Mediterranean species and used to be caught from Delta, Cairo and Lake Manzala (Boulenger, 1907)before High Dam construction.
World: Atlantic coasts, Gulf of Bothnia and Finland, Mediterranean coasts and North Sea.

Biology and Ecology :
-Marine, pelagic, also penterating a short distance up rivers (but some purely freshwater populations in lakes), shoaling, strongly migratory.
- Food; small fishes, euphausiids, mysids and isopods.
-Reproduction : mostly anadromous, during the breeding-season (January and February) adults used to ascend the Nile for the purpose of breeding; as far up as Cairo (Boulenger, 1907). Length not exceeding 36 cm.

Colour : back greenish or bluish, sides and belly silvery.

Economic Importance : marketable when caught.



16- *Alosa fallax* (Lacép.) رنجـة الصابوغـة - سردين

Order CYPRINIFORMES
Minnows and Carps

Body, more or less, cylindrical. No adipose fin. Mouth toothless, opening forwards or downwards. Pelvic fins abdominal. 3 branchiostegals.

FAMILY : CYPRINIDAE

Minnows and Carps

An extremely large family with about 275 genera and more than 1600 species. In Africa there are at least 24 genera and 475 species, including 13 species in Egypt. Cyprinids lack teeth on the jaws, but have strong pharyngeal bones with teeth. They lack a true stomach. Some are distinctly modified to live in strong currents.

Genus : ***Labeo*** **Cuvier, 1817**

In Africa there are at least 80 species, including 4 species in Egypt.

17.*Labeo niloticus* (Forsskål, 1775)

Synonyms : *Cyprinus niloticus* Forsskål, 1775,
Labeo niloticus Geoffroy, 1827,
Labeo vulgaris Heckel, 1846.

Common Name :

English : Nile carp

Arabic : لبيس أبيض نيلى (Lebeis - Lebeis Abiade Nili).

Status : Common.

Distribution :

Local : Along the River Nile and Lake Nasser.

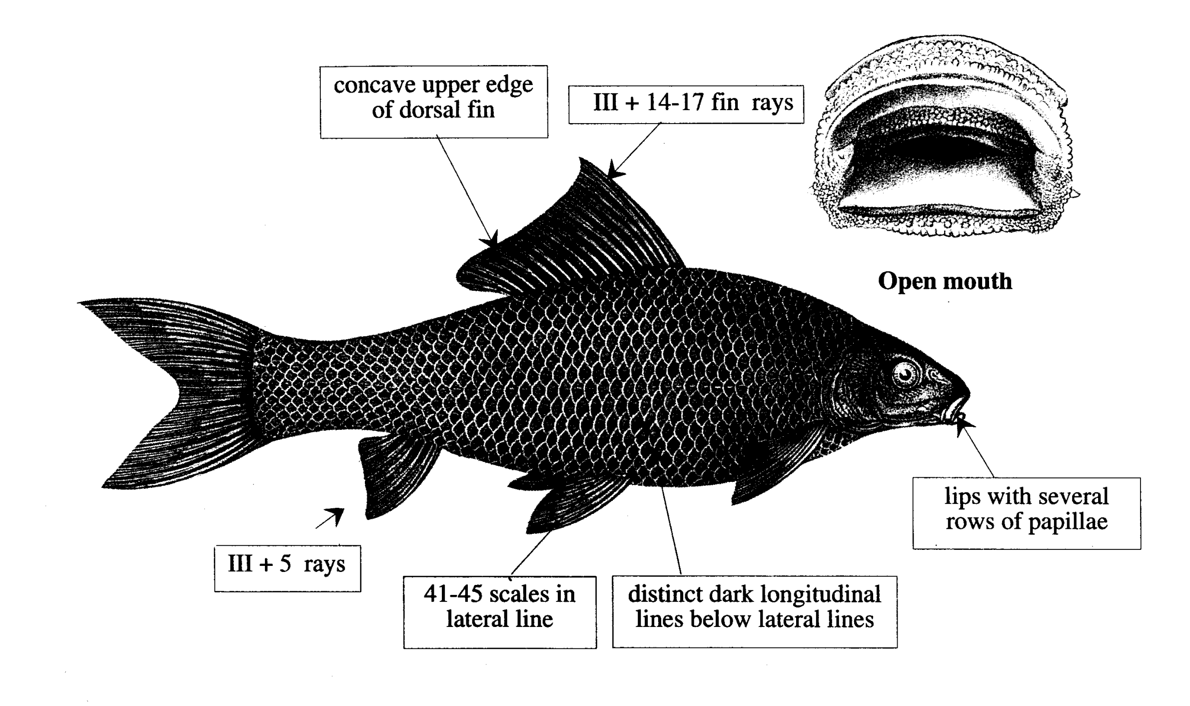
World : Blue and White Niles, Lake Nubia.

Biology and Ecology :

- It was common in Lakes Manzala, Burullus and Idku during flooding time.
- Herbivorous, feeding mainly on diatoms, blue green algae,green algae, and to a lesser extent on crustaceans, rotifers, nematodes and organic debris.
- Spawns in running water when about two years old. Spawning seasons during May-June. Reaching a total length of about 78 cm.

Colour : greyish, brownish or olive above, silvery white beneath.

Economic Importance : well marketable fish. It contributed about 2 % (1441 tons) of the total Nile catch in Egypt in 1996.



17- *Labeo niloticus* (Forssk.) لبيس أبيض نيلى

18. *Labeo horie* Heckel, 1846

Synonyms : *Chondrostoma dembensis* Cuvier & Valenciennes, 1844, *Labeo niloticus* Günther, 1868.

Common Name :

English : Black carp

Arabic : لبيـــس أسود هـــــــورى (Lebeis Aswad Horie).

Status : Rare.

Distribution :

Local : Lower and Upper Nile and Lake Nasser.

World : River Nile system, Lake Albert and East Africa.

Biology and Ecology :

-Restricted to inshore waters and sheltered bays.

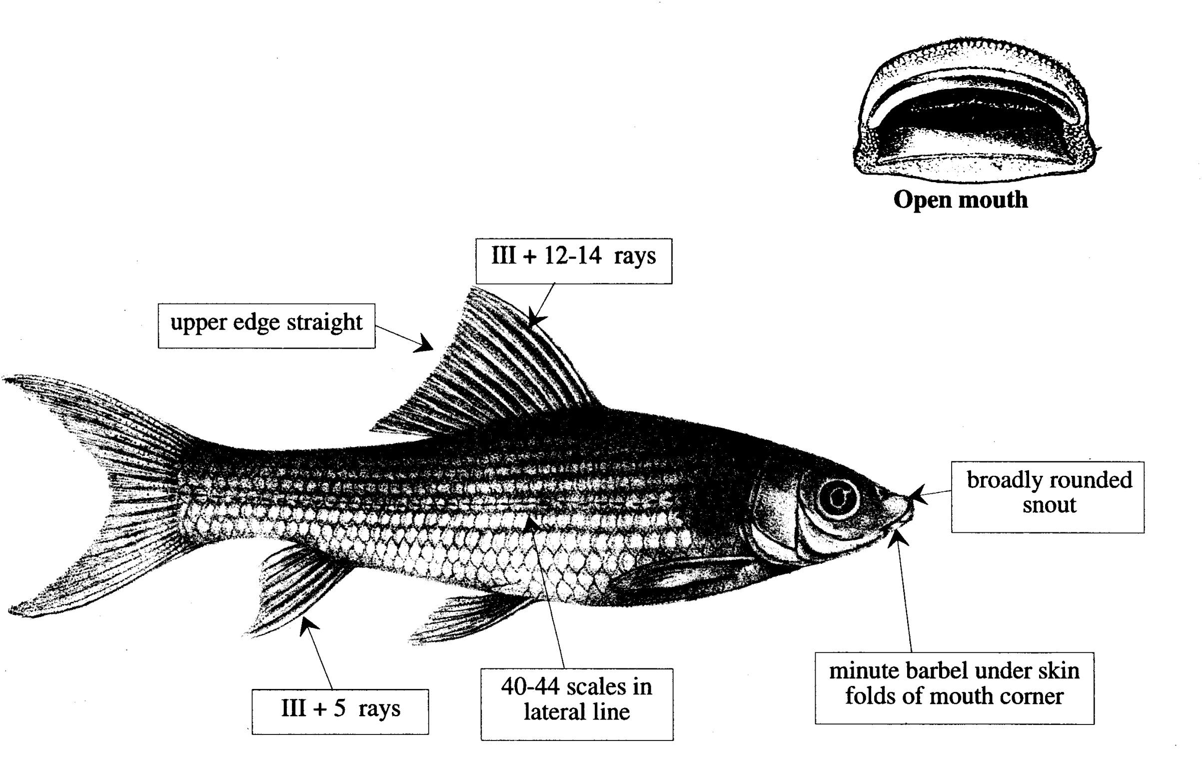
-Bottom feeder, vegetarian, epilithic algae and mud.

-Mature ovaries are voluminous and well developed in summer and spring.

-Average length 57 cm.

Colour : dark greyish-green, with blue reflections on the back, sides dull silvery-grey.

Economic Importance : marketable.



18- *Labeo horie* Heck. لبيس أسود هـــورى

19. *Labeo coubei* Rüppell, 1832

Synonyms : *Labeo selti* Cuvier & Valenciennes, 1870,
Labeo niloticus Heckel, 1846,
Labeo steindachneri Pfeffer, 1896.

Common Name :

English : Black carp
Arabic : لبيس أســـود – كوبى
(Lebeis Aswad - Koubi).

Status : Rare.

Distribution :

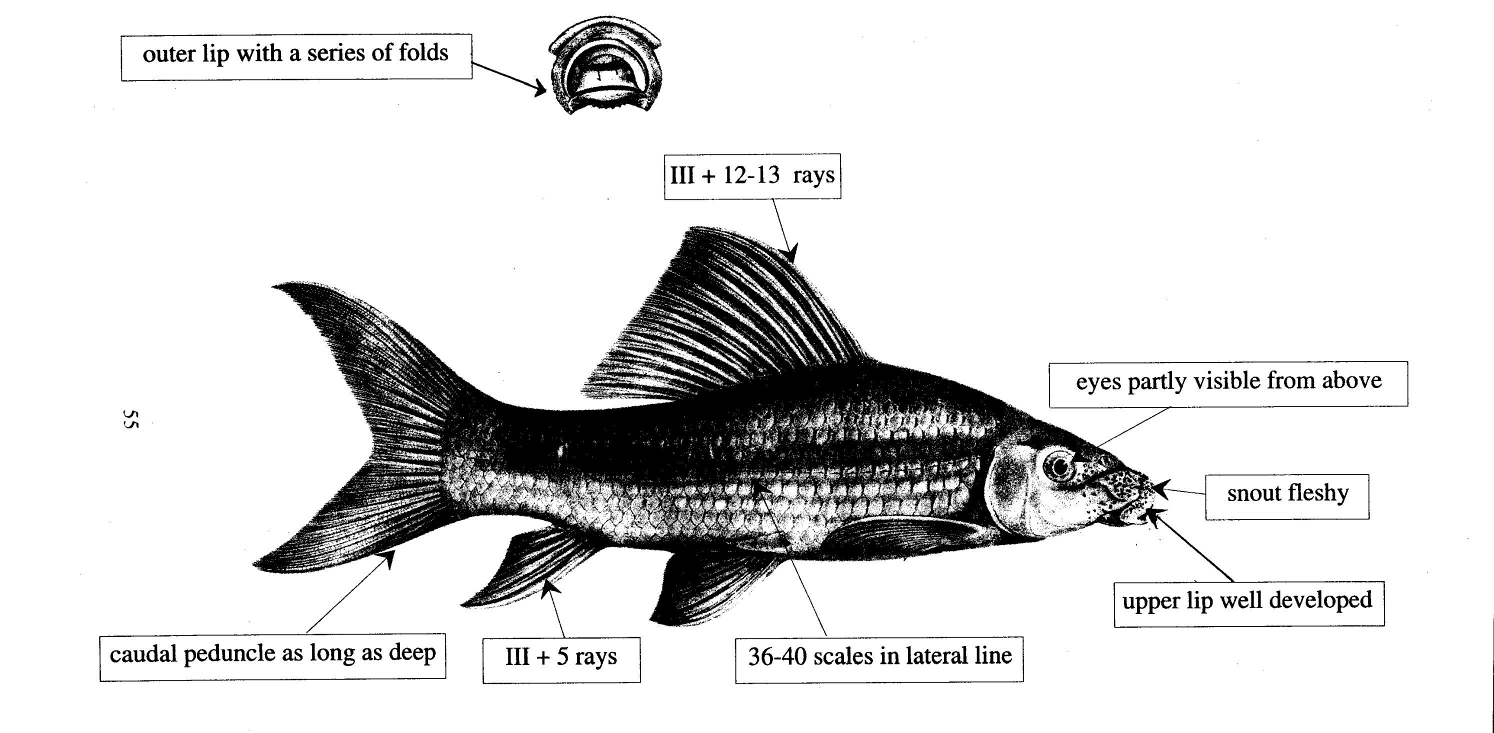
Local : Upper Nile and Lake Nasser.
World : Nile system to Lake Victoria, Senegal, Niger, Uganda : Lake Albert, Murchison Nile; Volta and Lake Chad.

Biology and Ecology :

-It inhabits inshore waters particularly sheltered bays.
-Bottom feeder, on mud, plant debris and diatoms.
-Mature ovaries are voluminous and well developed in spring and summer.
-Maximum length : 75 cm.

Colour : greyish olive, greenish brown or steel-blue above, pale golden or silvery beneath.

Economic Importance : well marketable fish.



19- *Labeo coubei* Rüpp. لبيس أسـود كوبى

victorianus Boulenger, 1907

20. *Labeo* ~~*forskalii*~~ (~~Forsskål~~, ~~1775~~)

Synonyms : *Cyprinus niloticus* Forsskål, 1775,
Labeo forskalii Rüppell, 1835,
Labeo forskalii Günther, 1868,
Labeo forskalii Higendoif, 1888.

Common Name :
Arabic : لبيس بربيس فورسكال
(Lebeis Berbese Forskal)

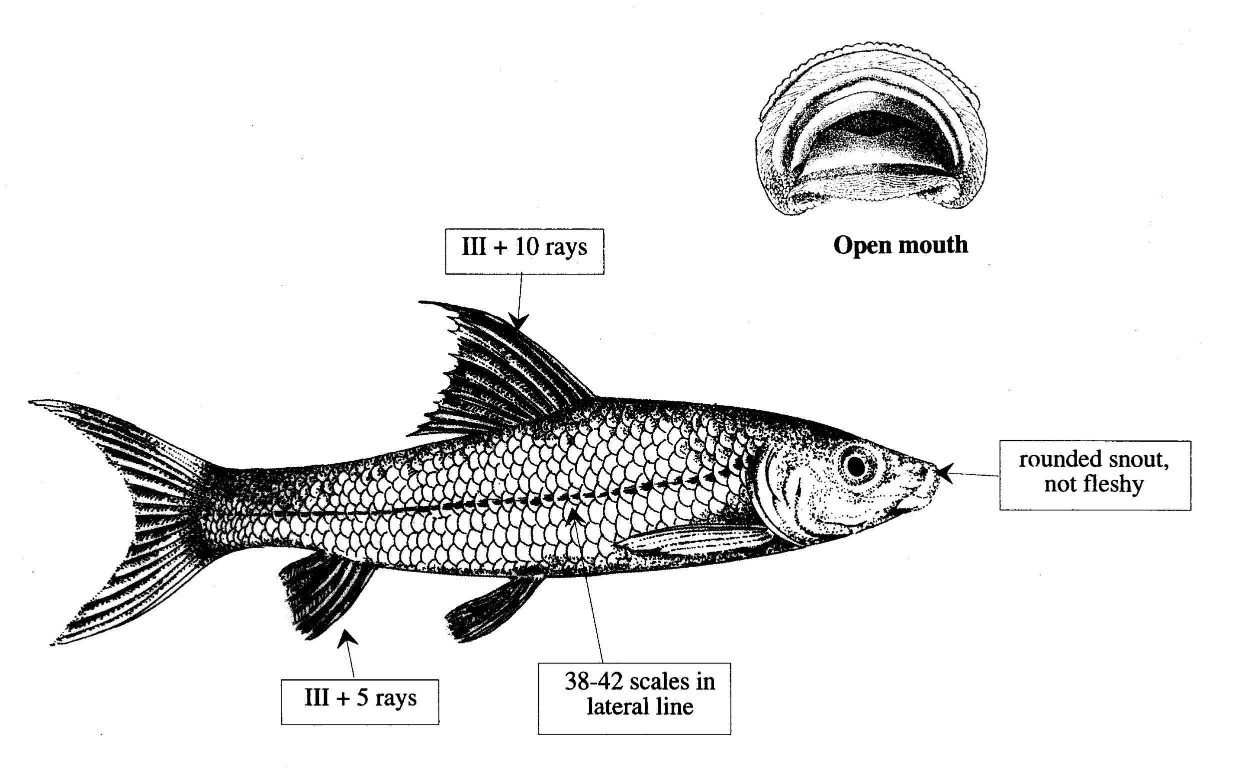
Status : Rare.

Distribution :
Local : Lower and Upper Nile and Lake Nasser.
World : River Nile system, Lakes Victoria and Kyoga, Victoria Nile and major rivers flowing into Lake Victoria.

Biology and Ecology :
- -Feeds on plant debris and mud.
- -It lives among stones, so the fish is mostly caught in the stony shore region of Lake Nasser.
- -Mature males and females are distinguished in summer.
- -Spawns in flooded grassland beside both permanent and temporary streams.
- -Total length 15-50 cm.

Colour : dark olive above and sides, white belly. Fins are dark greyish.

Economic Importance : marketable when caught.



20- *Labeo victorianus* Blgr. لبيس حجرى فيكتوريا

Genus : ***Garra* Hamilton Buchanan, 1822**

Body feebly compressed, somewhat rouded; covered by moderately large scales. Lateral line running along the middle of the flank and caudal peduncle. Lower lip in a circular pad, mouth forms a sucker, dorsal fin orgin well before pelvic fin ; anal fin base shorter than dorsal fin base. Mouth inferior and protactile. Thickened lips, one or two small barbels on each side. Gill opening not extending below the level of the pectoral fin base.

21. *Garra dembeensis* (Rüppell, 1836)

Synonyms : *Discognathus vinciguerrae* Boulenger, 1901

Common Name :

Arabic : أبـــو قــرص فينسيجرا

(Abu-Kurse Vincigerah).

Status : Very rare.

Distribution :

Local : Lake Nasser (Latif, 1984).

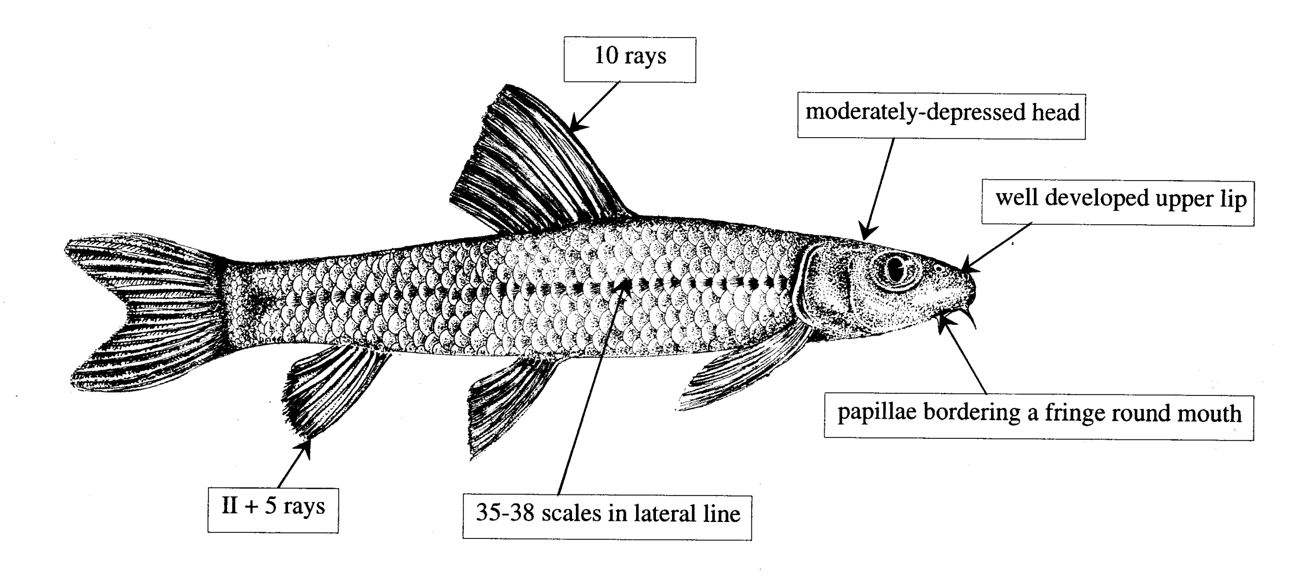
World : White Nile and North-East Africa.

Biology and Ecology :

- Length 4.5 cm.

Colour : yellowish, a dark spot or vertical bar on caudal peduncle and another one on the base of the fin. Fins whitish and transparent. Scales on back and sides finely speckled with brown especially towards the border.

Economic Importance : unmarketable.



21- *Garra dembeensis* (Rüpp.) **أبـو قـرص فينسيجرا**

Genus : *Barbus* Cuvier and Cloquet, 1816

There are nearly 300 species in Africa and 5 species in Egypt. Barbs are generally fusiform, with a variable but protrusible mouth and curved pharyngeal bones each with 3 rows of teeth. Dorsal fin often with a sharp spine.

22. *Barbus bynni* (Forsskål, 1775)

Synonyms : *Cyprinus bynni* Forsskål, 1775,
Cyprinus lepidotus Geoffroy, 1809,
Barbus binny Geoffroy, 1827,
Barbus lepidotus Rüppell, 1829.

Common Name :

- **English : Barbel**
Arabic : بنى أصيـــل (أصلى) [Benni Asseel (Aslie)]

Status : Common.

Distribution :

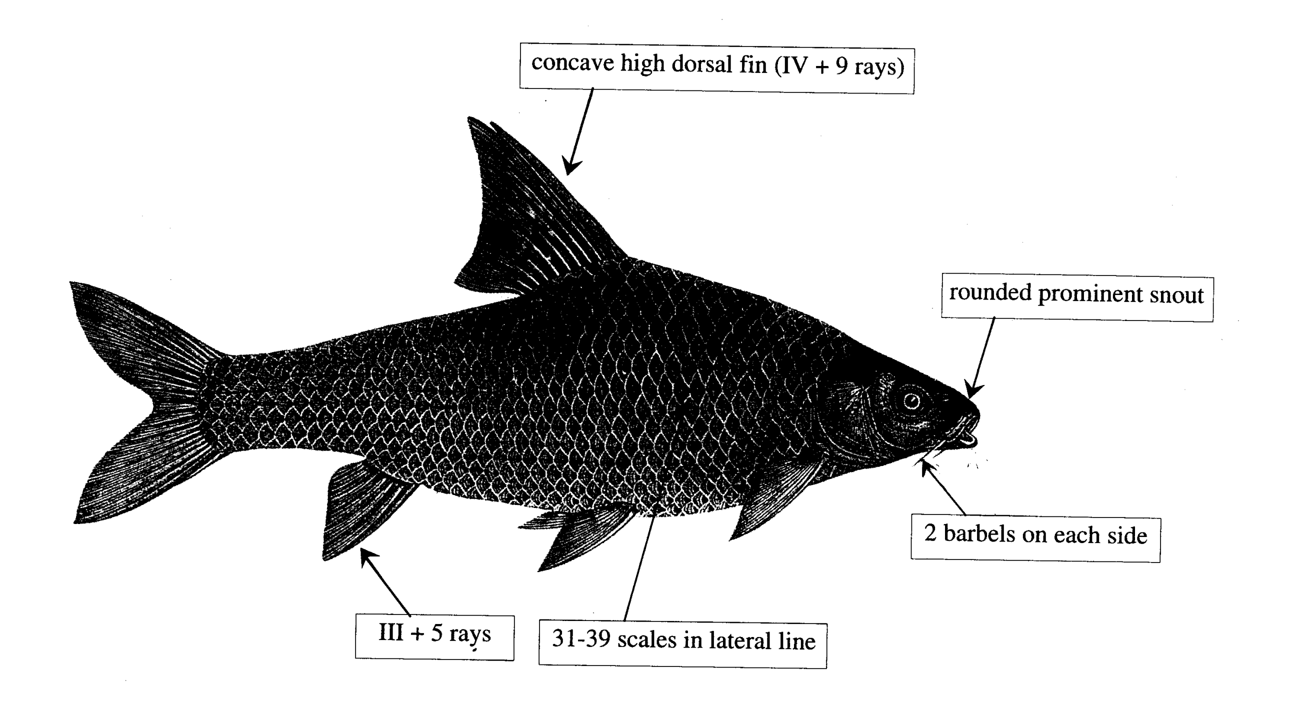
Local : Along the Nile and Lake Nasser (southern region).
World: River Nile system, Lakes Victoria and Albert, the Murchison and Albert Niles and Lake Rudolf.

Biology and Ecology :

-Males and females attain their first maturity at 55 and 60 cm total length. The spawning season extends from March to April.
-Food consists mainly of green algae, diatoms, blue algae and to a minor extent animal detritus, molluscs and insects.
-Maximum length about 75 cm.

Colour : body mostly of dull yellow colour, turning to olive on the back, fins yellowish to orange.

Economic Importance : it contributes about 0.4 % of the total Nile catch in Egypt.



22- *Barbus bynni* (Forssk.) (أصلى) بنى أصيل

23. *Barbus perince* Rüppell, 1837

Synonyms : none

Common Name :

English : Three spot Barb

Arabic : بنى برنس – فهـــده (Benni Brence - Fahdah)

Status : Rare.

Distribution :

Local : Delta, Lower Nile and Lake Nasser.

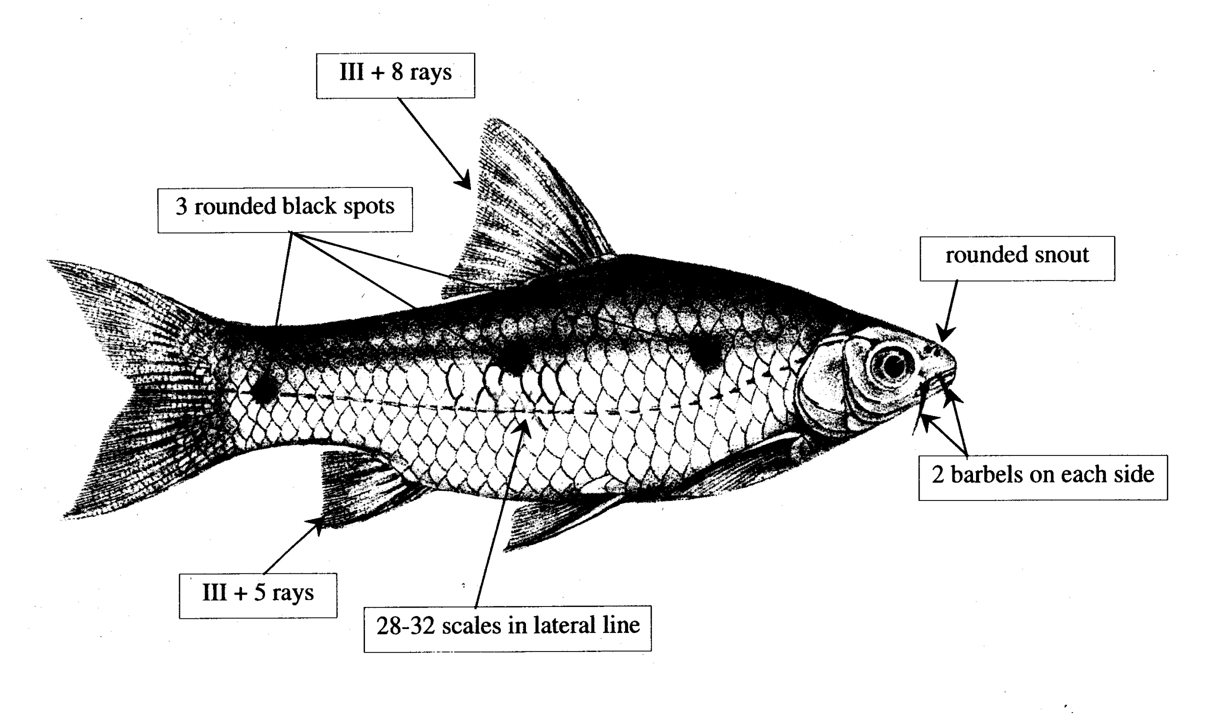
World: Blue and White Niles, Uganda : Kazinga Channel, Lake Edward, Lake Albert and Semliki River.

Biology and Ecology :

- Feeds on insects and other small invertebrates.
- Favours slow-flowing streams with vegetation.
- Breeds in summer.
- Small-sized fish, around 10 cm in total length.

Colour : silvery, greenish on the dorsal side, fins white or pale yellow. Often three distinct round blackish spots on each side.

Economic Importance : marketable (low valued fish).



23- *Barbus perince* Rüpp. بنى برنس - فهده

24. *Barbus neglectus* Boulenger, 1902.

Synonyms : none

Common Name :

English : Barbel

Arabic : بنـــى نجلكتس (Benni Neglectis).

Status : Very rare.

Distribution :

Local : Very rare in Lake Nasser.

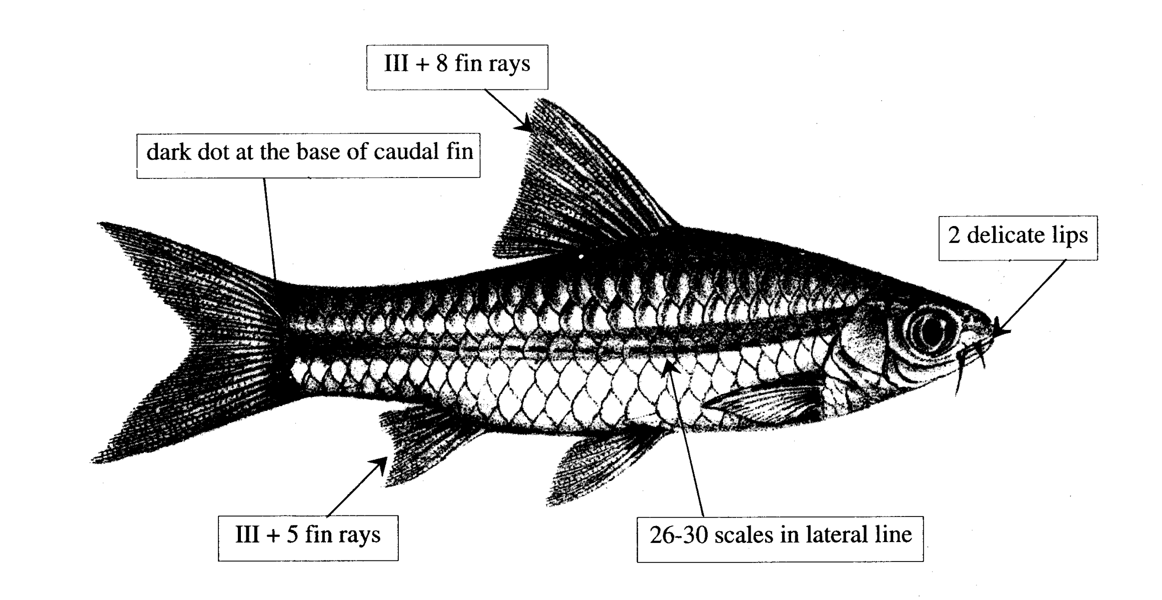
World : River Nile basin until Blue Nile, Albert Nile.

Biology and Ecology :

- It used to be caught from Lake Manzala, Damietta Branch (close to Barrage), Luxor and Aswan (Boulenger, 1907).
- A small-sized fish, about 5 cm in standard length.

Colour : yellowish with broad silvery lateral bands, fins white and transparent, a dark dot at the base of caudal fin.

Economic Importance : unmarketable.



24- *Barbus neglectus* Blgr. بنـى نجلكتس

25. *Barbus werneri* Boulenger, 1905

Synonyms : *Barbus miolepis* Boulenger, 1903.

Common Name :

English : Barbel

Arabic : بنـــى فـــرنر (Benni Verner).

Status : Very rare.

Distribution :

Local : Lake Nasser.

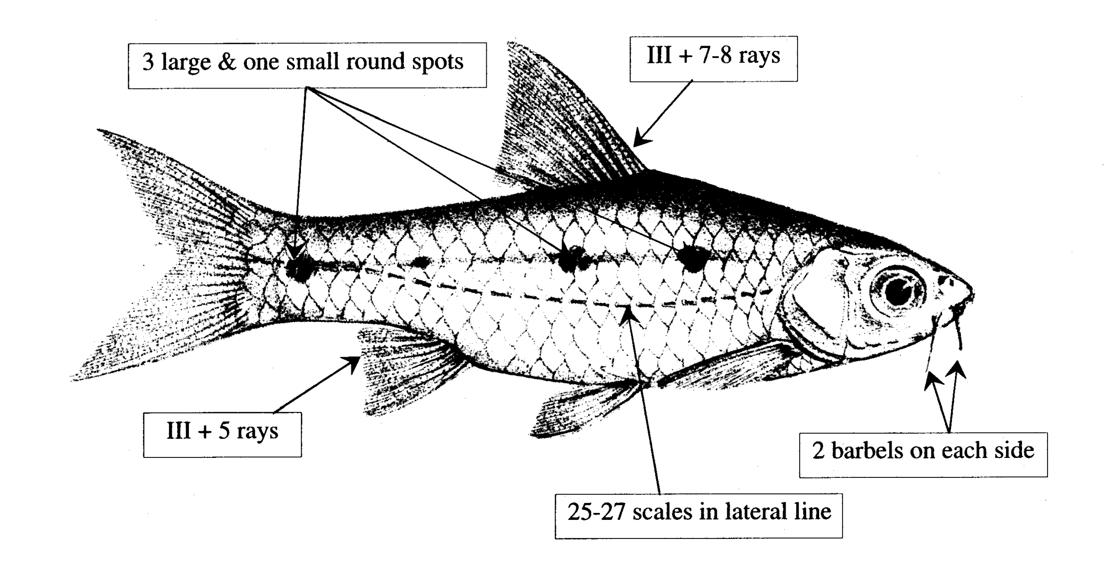
World : White Nile, Wadi Halfa and East Africa.

Biology and Ecology :

- It prefers shallow water.
- Small fish about 4 cm.

Colour : yellowish, with silvery sides, identified by the presence of three large and one small round spot, the posteriormost on the caudal peduncle near the fin, fins whitish.

Economic Importance : unmarketable.



25- *Barbus werneri* (Blgr.) بنـی فرنر

26. *Barbus anema* Boulenger, 1903

Synonyms : *Barbus miolepis* Boulenger, 1903

Common Name :
English : Barbel
Arabic : بنـــى أنيـــما (Benni Anema).

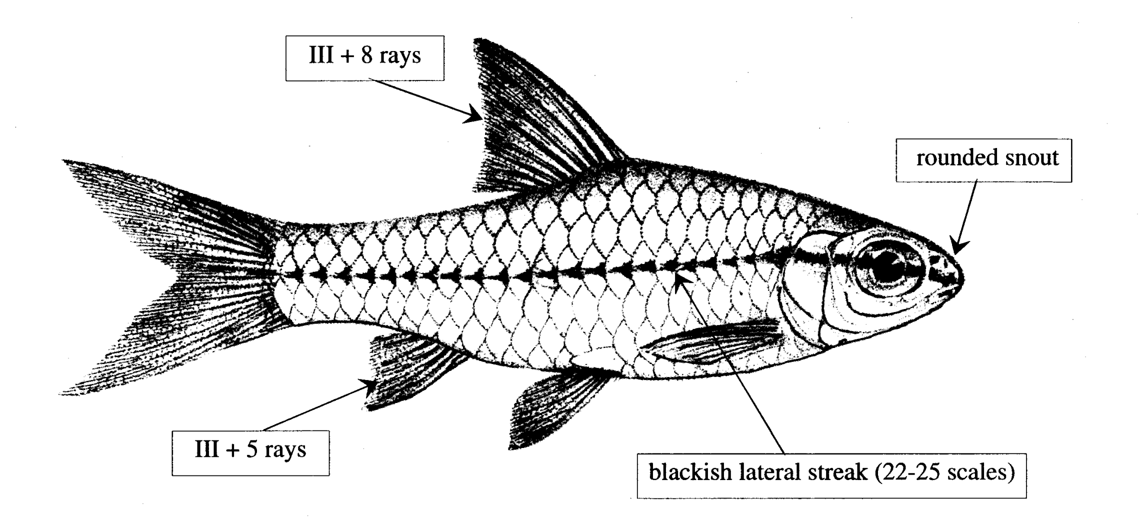
Status : Rare.

Distribution :
Local: Lake Nasser, previously recorded by Boulenger (1907) between Aswan and Luxor.
World : Lake Nubia and White Nile.

Biology and Ecology :
- Lives in shallow, well vegetated streams.
- Feeds on small aquatic insects and algae.
- Breeds in summer, laying eggs among vegetation.
- Small-sized fish, about 5 cm in standard length.

Colour : silvery yellowish, sometimes with a blackish lateral streak passing through the eye.

Economic Importance : attractive aquarium fish.



26- *Barbus anema* (Blgr.) بنى أنيما

Genus : ***Leptocypris***

It is represented by only one species in Egypt. Snout is pointed and they have large eyes.

27. *Leptocypris niloticus* (Joannis, 1835)

Synonyms : *Leuciscus niloticus*, Joannis, 1835,
Alburnus niloticus, Heckel, 1846,
Barilius niloticus, Günther, 1868,
Alburnus alexandrinus, Steindachner, 1893.

Common Name :
Arabic : ببى - مرجـــان نيـــلى (Bebee - Morgan Nili).

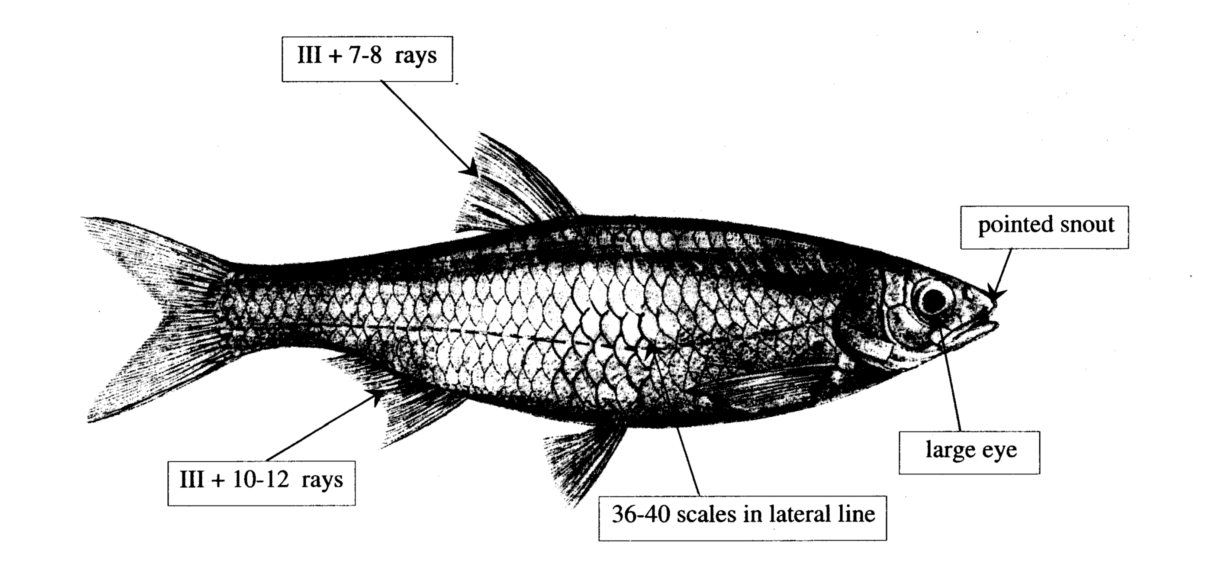
Status : Rare.

Distribution :
Local : Upper Nile (Aswan) and southern part of Lake Nasser.
World : River Nile system, Blue Nile, Lake Albert and Upper Niger.

Biology and Ecology :
-An active fish, moving in schools under the surface of shallow water.
-Food consists mainly of tiny fry of other fishes and zooplankton.
-Before the High Dam construction, used to occur in abundance following the flood, from Delta to Aswan (Boulenger, 1907).
-Length : 2-9.5 cm.

Colour : uniform silvery, darker on the back, fins whitish.

Economic Importance : unmarketable.



27- *Leptocypris niloticus* (Joann.) **ببیی - مرجـان نیـلی**

Genus : ***Raiamas***

Differ from other genera on the basis of some skeltal structurres. Only one species in Egypt.

28. *Raiamas loati* (Boulenger, 1901)

Synonyms : *Barilius loati* Boulenger, 1901.

Common Name :
Arabic : مرجـــان لوتـــى (Morgan loutti).

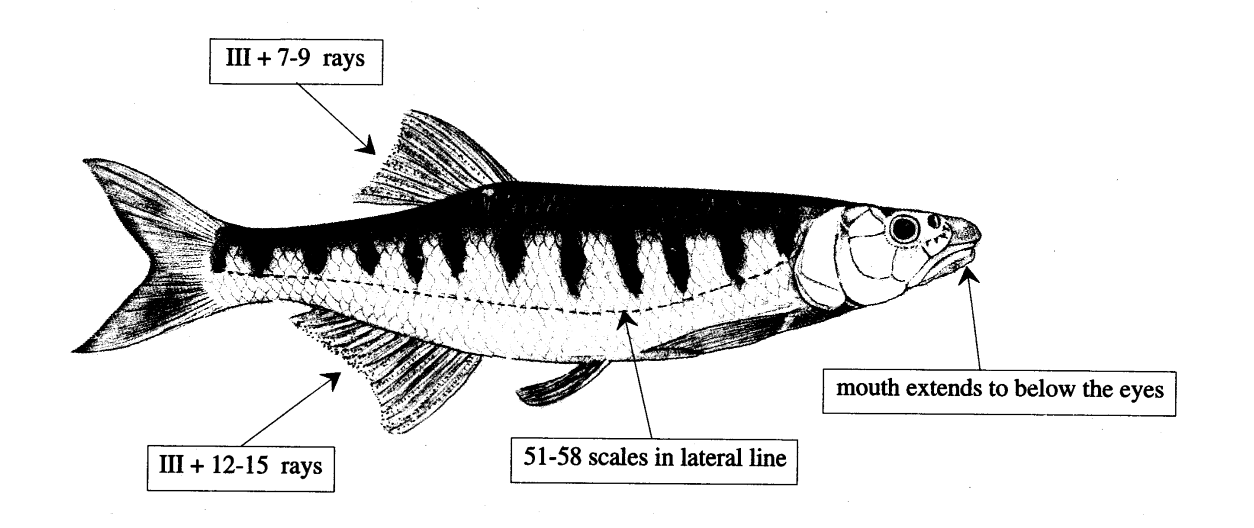
Status : Rare.

Distribution :
Local : Upper Nile (Luxor and Aswan) and Lake Nasser.
World : Nubia Lake, Blue Nile.

Biology and Ecology :
- Sexes can be distinguished externally.
- Average length : 18 cm.

Colour : silvery white; green or steel blue on back, with 10-16 distinct black vertical bars on each side of the body above lateral line. Fins white tinged with pink or orange, caudal edge black.

Economic Importance : marketable when caught.



28- *Raiamas loati* (Blgr.) مرجان لوتی

Genus : *Chelaethiops* Boulenger 1899

It is representd by one species in Egypt. Small fish with pointed snout. Mouth extends to below centre of eyes.

29.*Chelaethiops bibie* Joannis, 1835

Synonyms : *Leuciscus bibie* Joannis, 1835,
Chelaethiops brevianalis (Joannis, 1835),
Pelecus bibie Heckel, 1846,
Barilius bibie Günther, 1869,
Chelaethiops bibie Boulenger, 1902.

Common Name :
Arabic : بيبيـــه كليتوبس (Bebee Cheltiopis).

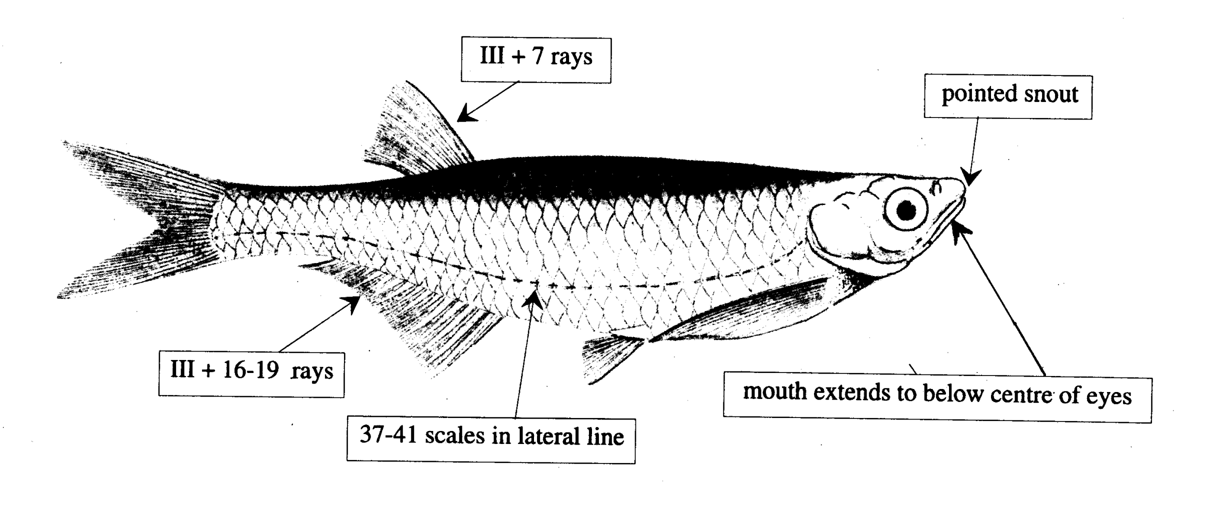
Status : Rare, previously it was caught from lower Nile; Nile Delta, Barrage and Cairo (Boulenger, 1907).

Distribution :
Local : Upper Nile (Luxor and Aswan) and Lake Nasser.
World : Lake Nubia, White Nile, South-Eastern Asia, China and tropical Africa.

Biology and Ecology :
- No external sexual characters.
- It lives in the shore regions of sheltered areas.
- Mature gonads are distinguished in spring and summer.
- Length : 5-7 cm.

Colour : body uniform silvery, fins yellowish white.

Economic Importance : unmarketable.



29- *Chelaethiops bibie* (Joannis) ببيـه كليتوبس

Order CHARACIFORMES

Characins

Pelvic fins abdominal. 3 to 5 branchiostegals. Teeth usually well developed. Adipose fin present.

FAMILY : CHARACIDAE

African Tetras

There are 18 genera and over 100 species of African characins, confined to tropical waters; 5 genera and 9 species in Egypt. The family name refers to the sharp-pointed teeth of many species. Adipose fin is higher than long. No spines in dorsal fin.

Genus : ***Hydrocynus*** **Cuvier 1817**

These are brightly striped. stream lined fishes, with large, sharp, widely spaced, intelocking teeth. The name *Hydrocynus* means "water dog". 3 species represent this genus in Egypt.

30.*Hydrocynus forskalii* (Cuvier 1819)

Synonyms : *Salmo dentex* Forsskål, 1775,
Characinus dentex Geoffroy, 1809,
Hydrocyon dentex Rüppell, 1829.

Common Name :

English : Tiger fish.

Arabic : كلب السمك - كلب البحر فورسكال

(Kalb El samak - Kalb El bahr Forskal)

Status : Moderately common.

Distribution :

Local : Along the River Nile and at the shores of Lake Nasser and inside lagoons.

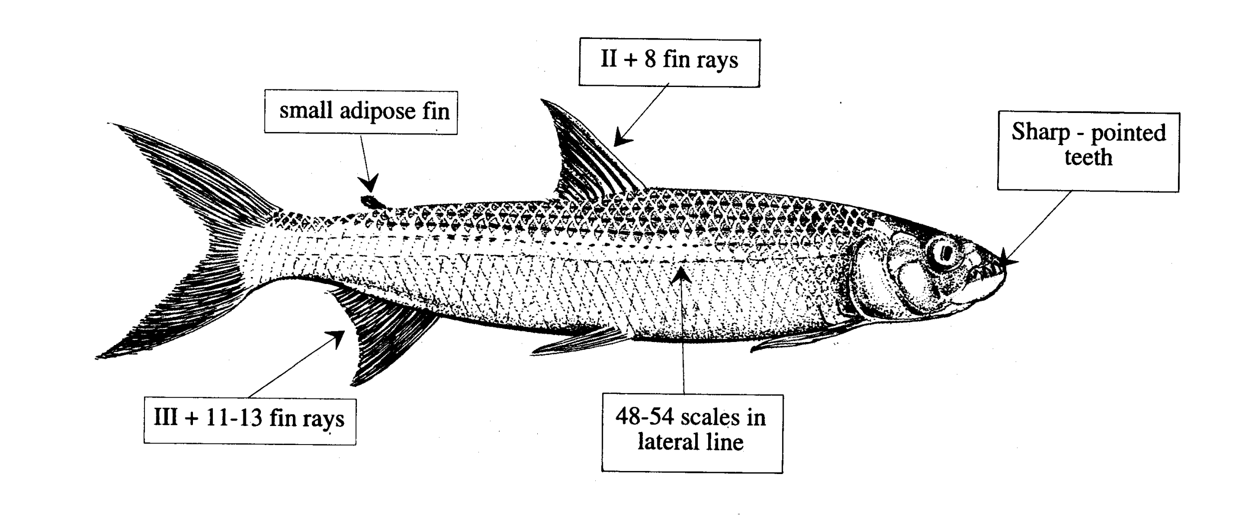
World: Blue and White Niles, Senegal, Niger, Uganda, Gambia, Lakes Rudolf and Chad.

Biology and Ecology :

-Surface fish in most habitats.
-Fierce fighting fish, feeds mainly on fish and to a minor extent on insects and shrimps.
-Spawning takes place most of the year.
-Length : to 45 cm or more.

Colour : silvery on flanks and abdomen, graduated into black with orange patches on the back, fins of an orange-flame colour.

Economic Importance : this fish used to be salted especially in Upper Egypt, now imported as salted fish from Sudan.



30 - *Hydrocynus forskalii* (Cuv.) كلب السمك - كلب البحر فورسكال

31. *Hydrocynus vittatus* (Castelneu, 1861)

Synonyms : *Hydrocyon lineatus* Bleeker, 1862,
Hydrocyon forskalii Steindachner, 1894.

Common Name :

English : Tiger fish

Arabic : كلب البحر المخطط (Kalb El Bahr El makhatat)

Status : Very rare.

Distribution :

Local : Lake Nasser.

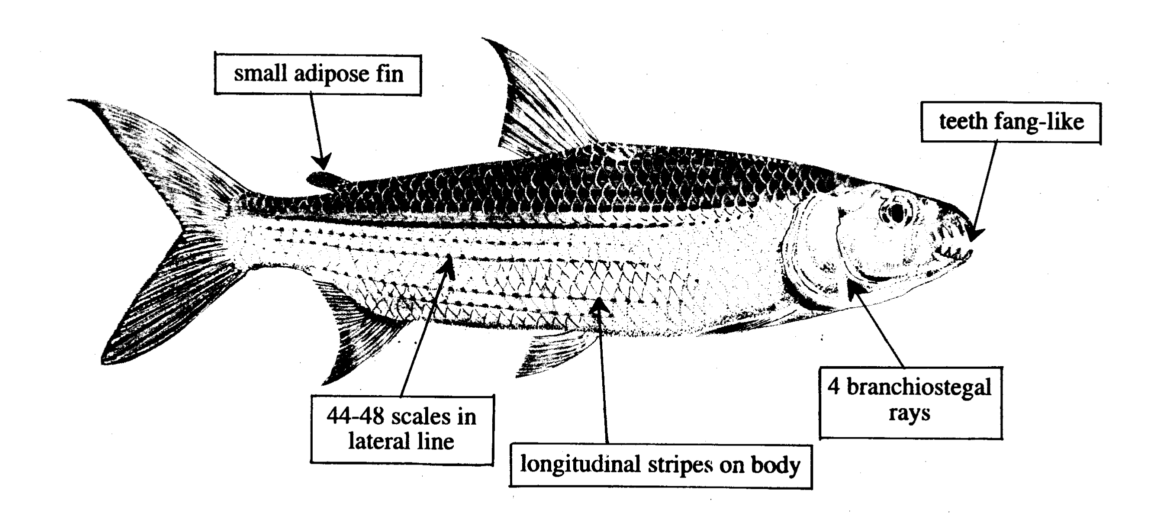
World: White and Blue Niles, Niger, Congo, Uganda; Lake Albert, Albert and Murchison Niles, Lakes Tanganyika and Rudolf.

Biology and Ecology :

-It keeps to deep water.
-It is active in the evening and early morning.
-It can jump over the water surface to catch its food.
-It feeds on fish including *Alestes* spp. and *Tilapia* spp.
-Breeds during summer, and spawning may occur at night. Fecundity extremely high, as many as 780,000 ova in large females.
-Length : to 48 cm.

Colour : body and head silvery, with bluish sheen on back and a series of parallel longitudinal stripes; adipose fin black; caudal fin varies from yellow to blood red, with a black edge.

Economic Importance : marketable when caught.



31- *Hydrocynus vittatus* (Castel.) كلب البحر المخطط

32. *Hydrocynus brevis* (Günther, 1864)

Synonyms : *Hydrocyon forskalii* Cuvier & Valenciennes, 1849,
Hydrocyon brevis Günther, 1864.

Common Name :

English : Tiger fish

Arabic: كلب البحـــر بريفز – كلب الســمك

(Kalb El Bahr Brevis - Kalb El Samak)

Status : Rare, used to be caught from Lower Nile to Luxor (Boulenger, 1907), now restricted to Lake Nasser.

Distribution :

Local : Lake Nasser.

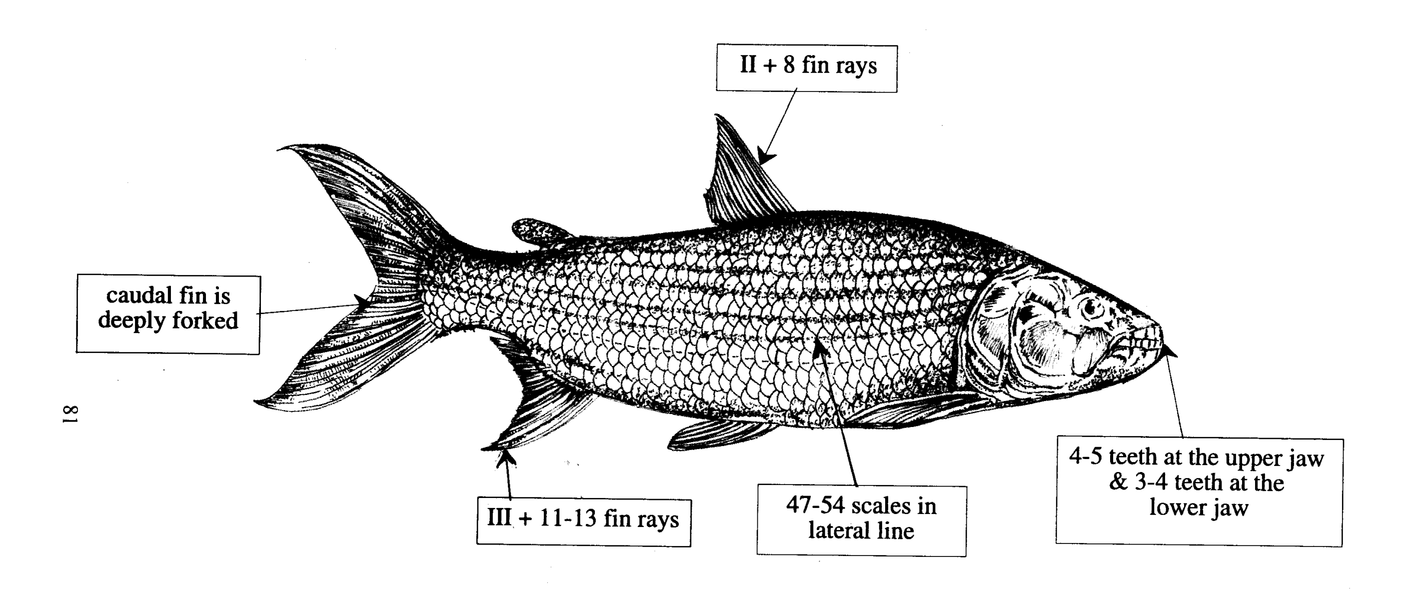
World : Khartoum, Senegal, Gambia and Chad basins.

Biology and Ecology :

-It is found in shore waters and in the lagoons of Lake Nasser.
-It feeds mainly on fish, aquatic insects and shrimps.
-This species is easily distinguished from *H. forskalii* by the shorter body, covered with proportionally smaller scales, the smaller eye and the more posterior position of the dorsal fin.
-Length : to 50 cm.

Colour : longitudinal dark streaks or series of spots, more or less distinct in adult fish, usually confined to the region above lateral line.

Economic Importance : marketable when caught.



32- *Hydrocynus brevis* (Gthr.) كلب البحر بريفز

Genus : *Alestes* Müller, 1844

Two rows of multicuspid teeth in the upper jaw. Adipose eyelid is well developed. Terminal mouth. Two species are recorded in Egypt.

33.*Alestes dentex* (Linnaeus, 1758)

Synonyms : *Salmo dentex* Linnaeus, 1757,
Characinus niloticus Geoffroy, 1809,
Myletes hasselquistii Cuvier, 1818,
Alestes hasselquistii Cuvier & Valenciennes, 1849,
Alestes sethente Cuvier & Valenciennes, 1870.

Common Name :
English : Pebbly Fish
Arabic: راى أبو أسنان (Rie Abu Asnan)

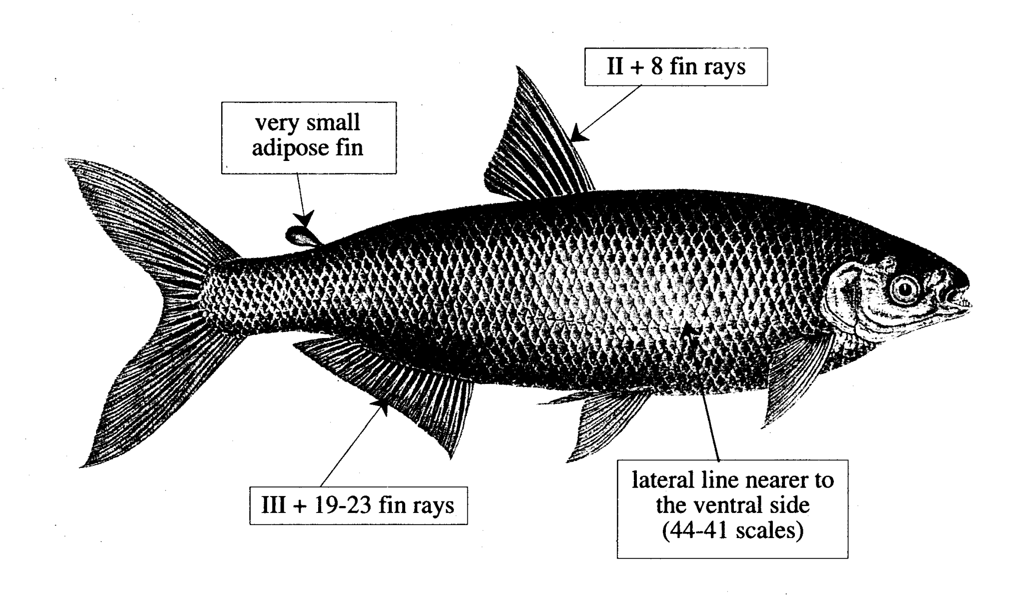
Status : Rare.

Distribution :
Local : Upper Nile (Assiut, Sohag and Aswan) and Lake Nasser.
World: Lower Nile, White Nile, Senegal, Gambia, Niger, Chad basin; Uganda: Lake Albert and Murchison Nile.

Biology and Ecology :
- It prefers rapidly-flowing water.
- It feeds on insects (chironomid larvae, coleopterans), crustaceans and aquatic vegetation.
- Spawning season extends from April to August with a peak in June.
- The longest specimens measure 31 cm.

Colour : silvery, body dark grey or dark green, blue black spots of the upper half of the sides.

Economic Importance : marketable at certain seasons, used as salted fish especially in Upper Egypt. Its production decreased after the High Dam construction.



33- *Alestes dentex* (L.) راى أبو أسنان

34. *Alestes baremoze* (Joannis, 1835)

Synonyms : *Salmo niloticus* Linnaeus, 1766,
Myletes baremose Joannis, 1835,
Myletes hasselquistii Cuerin, 1844,
Alestes kotschyi Heckel, 1849,
Alestes baremose Boulenger, 1901.

Common Name :

English : Pebbly Fish

Arabic: رشالة – راى – ملوحة

(Rashala - Rie - Meloha)

Status : Rare.

Distribution :

Local :Southern region of Lake Nasser and Upper Nile. This fish used to be found along the whole River Nile; in Delta lakes, Rashid Branch and Lower Nile, now restricterd to the Upper Nile after the High Dam construction.

World: Blue and White Niles, Lake Nubia, Lake Chad, Senegal, Gambia and Niger; Uganda : Lake Albert, the Albert and Murchison Niles.

Biology and Ecology :

-Probably limited to inshore regions of lakes.

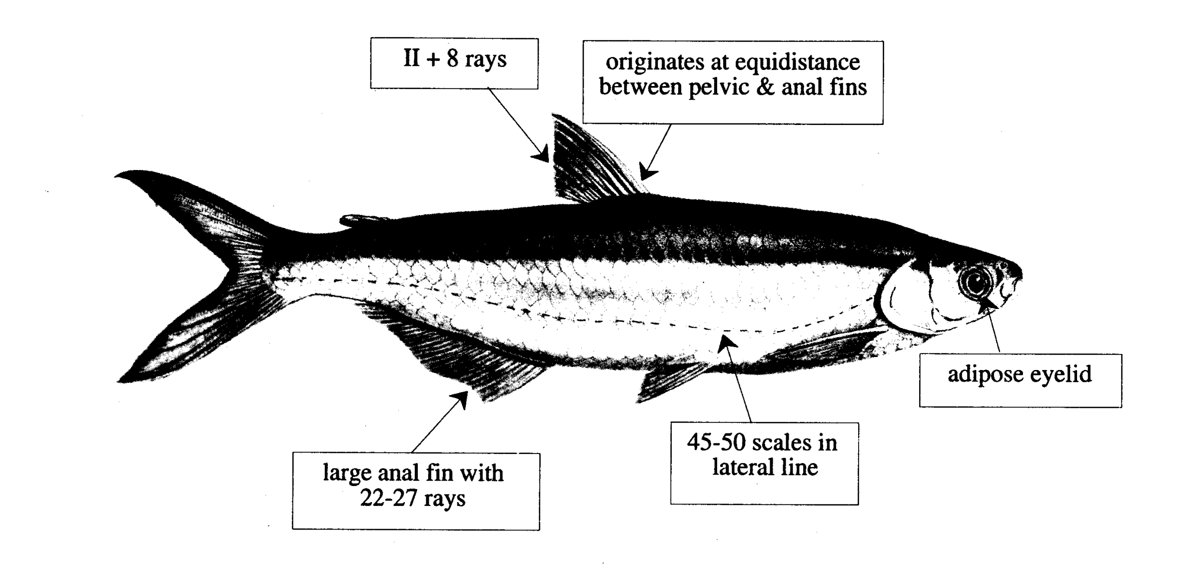
-Food mainly zoo- and phytoplankton, crustaceans, insects and, less frequently, fishes predominating and aquatic vegetation.

-Breeding fishes of both sexes are found in sheltered bays around the lake shores.

-Adult fishes range between 30-45 cm long.

Colour : comparable to *A. dentex.*

Economic Importance : marketable at certain seasons, used as salted fish, especially in Upper Egypt.



34- *Alestes baremoze* (Joann.) رشالة - راى - ملوحة

Genus : Brycinus Valenciennes, 1849

About 30 species in Africa; 2 in Egypt. Adipose eyelid is absent or poorly developed. Two rows of multicuspid teeth in upper jaw.

35.*Brycinus nurse* (Rüppell, 1832)

Synonyms : *Myletes nurse* Rüppell, 1832,
Myletes guile Joannis, 1835,
Alestes nurse Müller & Troschel, 1845,
Brachyalestes nurse Günther, 1864,
Alestes leucuiscus Günther, 1867,
Brachyalestes ruppellii Günther, 1869,
Alestes ruppellii Günther, 1898.

Common Name :
English : Imberi
Arabic: راى سردينـــه نورس (Rie Sardinet Nurse).

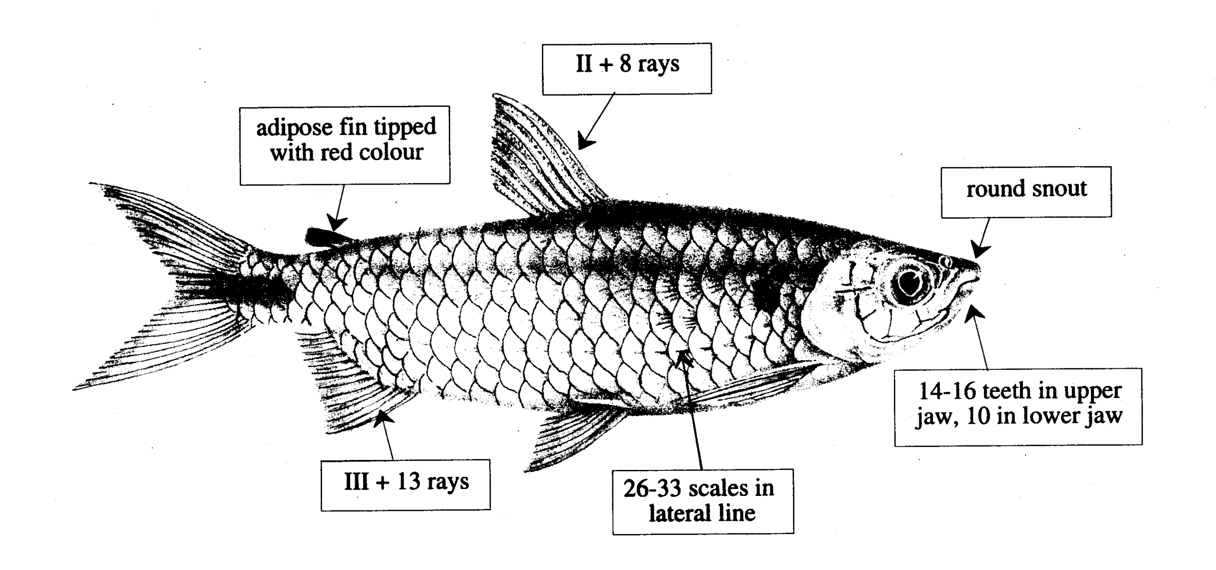
Status : Common in certain seasons.

Distribution :
Local : Southern region of Lake Nasser and Upper Nile.
World: Lake Rundolf, Lake Chad basin, Uganda : Lake Victoria and Nabugaba, Victoria Nile, Lake Albert, Niger, Volta, Gumbia, Senegal, Liberia and the Cameroons.

Biology and Ecology :
-It usually forms shoals in the clear shore regions of Lake Nasser.
-It feeds on algae, insects and planktonic crustaceans, less frequently small fishes mainly *Haplochromis* spp.
-It spawns at the beginning of the rainy season.
-In Lake Nasser mature ovaries are distinguished most of the year and are greyish in colour.
-It ranges from 10 to 12 cm in standard length, largest specimens caught from the Nile 19.5 cm.

Colour : silvery, often a blackish patch lies at the beginning of the lateral line and on the caudal peduncle, extending to the fin rays.

Economic Importance : marketable at certain seasons.



35- *Brycinus nurse* (Rüpp.) رای سردینـه نورس

36.*Brycinus macrolepidotus* (Cuvier & Valenciennes, 1849)

Synonyms : *Alestes macrolepidotus* Bilharz, 1852.

Common Name :

English : Imberi

Arabic: راى صفصفـــه – كامبـــوت

(Rie Safsafa - Kamboot)

Status : Extinct, used to be caught from the Upper Nile (Boulenger, 1907).

Distribution :

Local : Extinct.

World : Senegal, Niger and Lake Tanganyika.

Biology and Ecology :

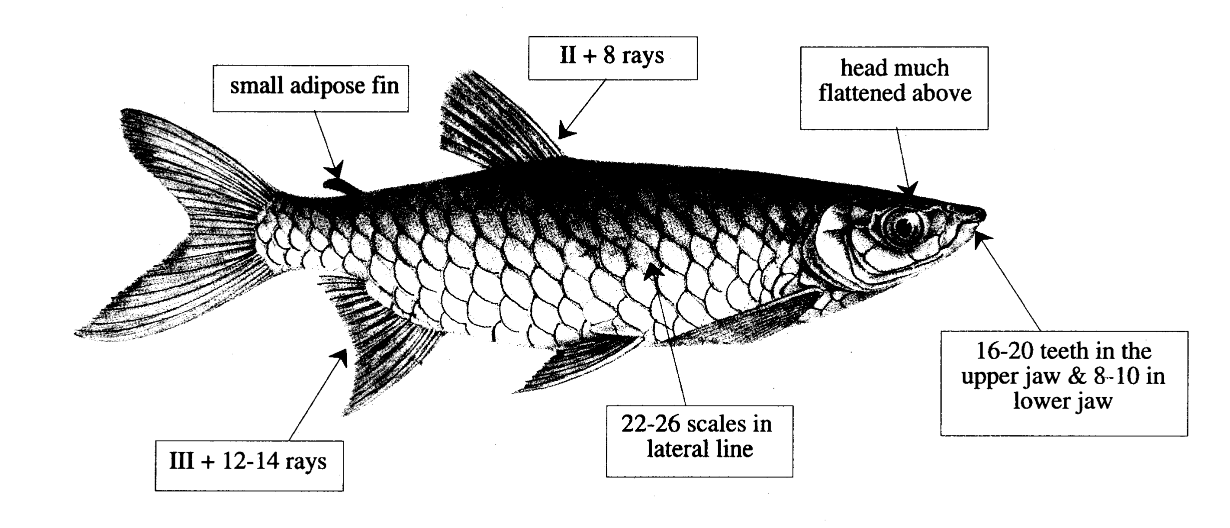
-Feeds on leaves of willow plant, vegetable matter, small insects, bottom debris and small fishes.

-Body moderately compressed, flattened on back.

-Length : to 42 cm.

Colour : Silver, bluish grey dorsally, a dark blotch above the pectroal fin in young fishes, as well as a dark, narrow longitudinal band on the flank. Both of these markings are faint in life, but are intensified after death.

Economic Importance : not known.



36 - *Brycinus macrolepidotus* (Cuv. & Val.) راى صفصفه - كامبوت

Genus : *Micralestes* Boulenger, 1899

About 14 species in Africa; one in Egypt. It differs from *Alestes* in having multicuspid inner tooth pair. Lower jaw projects forward. Dark stripe along side, widening towards tail.

37.*Micralestes acutidens* (Peters, 1852)

Synonyms : *Alestes acutidens* Peters, 1868.
Brachyalestes acutidens Günther, 1864.

Common Name :
English : Silver Robber
Arabic : حـــاد الأسنـــــان – ميكر السنس (Had El Asnan)

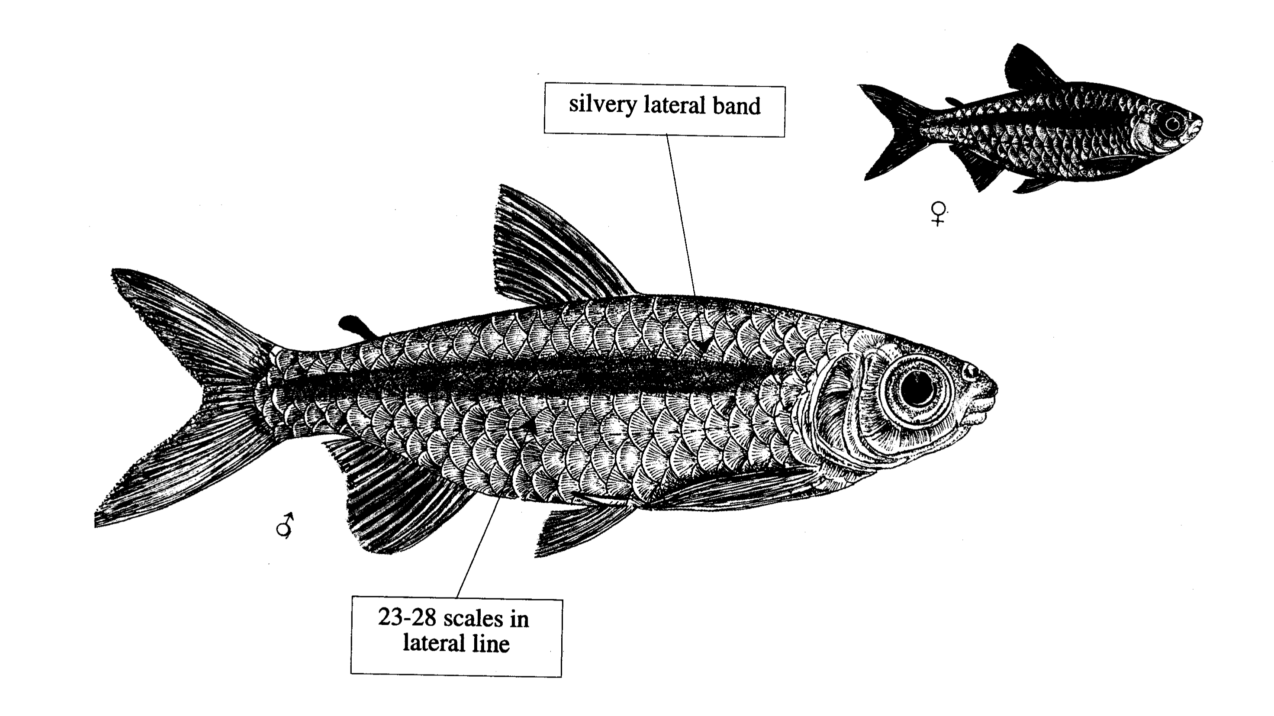
Status : Extinct, used to be caught from Luxor and Aswan (Boulenger, 1907).

Distribution :
Local : Extinct.
World: Widely distributed in tropical Africa, Sudan, Niger and Congo.

Biology and Ecology :
-Upper jaw with 2 raws of sharp multicuspidate teeth.
-Shoals in clear, flowing or standing open water.
-Omnivorous, often feeding from surface waters on winged insects and zooplankton.
-Matures after a year and lives for about 3 years.
-A partial spawner and fecundity is moderate, with usually fewer than 700 eggs per female.
-The fish does not exceed a length of 9.5 cm.

Colour : yellowish, with a broad silvery lateral band. Fins are white and transparent.

Economic Importance : used as bait for tigerfish.



37- *Micralestes acutidens* (Peters) ميكرالستس - حـاد الأسنـان

Genus : ***Ichthyoborus* Joannis, 1835**

It was represented by one species in Egypt, which is extinct now. Head is flattened above.

38. *Ichthyoborus besse* (Joannis, 1835)

Synonyms : *Characinus besse* Joannis, 1835,
Ichthyoborus microlepis Günther, 1864.

Common Name :
Arabic: بســه – اكتيوبور (Bessah)

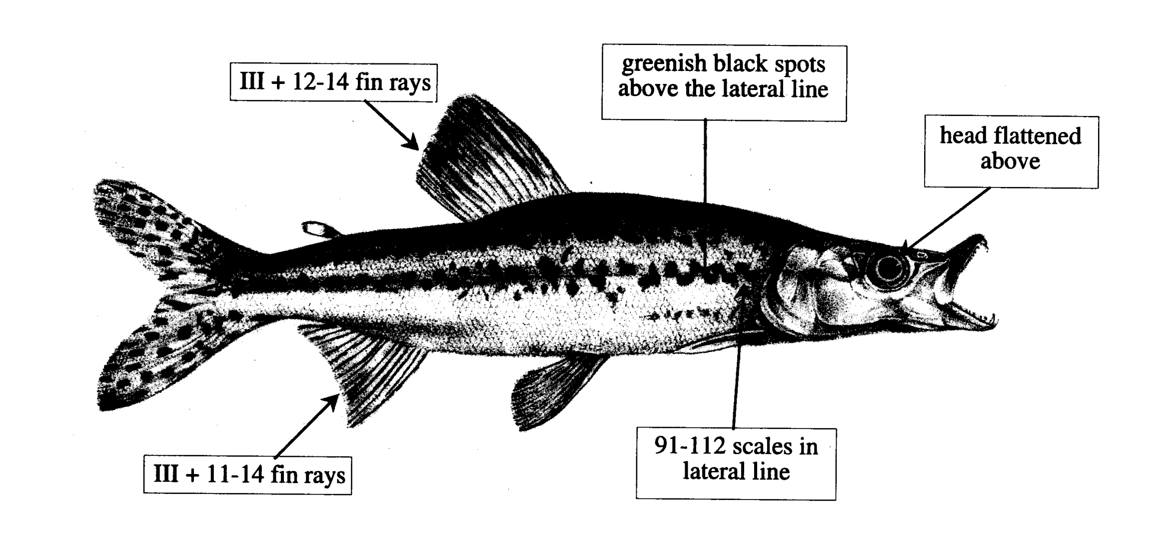
Status : Extinct, used to be found in Upper Nile (Boulenger, 1907).

Distribution :
Local : Extinct.
World : Khartoum, White Nile and Lake Nubia.

Biology and Ecology :
-The fish used to descend the Nile in pairs for breeding.
-Carnivorous.
-Maximum length 19 cm.

Colour : silvery, back pale olive, greenish black spots above the lateral line. Fins whitish except the caudal which is pale yellow with numerous black spots.

Economic Importance : not known.



38- ***Ichthyoborus besse*** **(Joann.) اکتیوبور بسه**

FAMILY : DISTICHODONTIDAE

It includes about 17 genera and 90 species in Africa. The name "distichodont" refers to the characteristic two rows of teeth of these fishes. Body is deep and narrow. They have unusual square-shaped mouths and distinctive ctenoid scales. It is represented by 2 genera and 4 species in Egypt.

Genus : ***Distichodus*** **Müeller & Troschel, 1844**

Easily identified on account of their deep compressed bodies, two even rows of teeth on each jaw. It is represented by 3 species in Egypt.

39.*Distichodus niloticus* (Linnaeus, 1762)

Synonyms : *Salmo niloticus* Linnaeus, 1762,
Salmo aegyptiacus Gmelin, 1788,
Characinus nefasch Lacépède, 1803,
Citharinus nefasch Rüppel, 1829,
Distichodus nefasch Cuvier & Valenciennes, 1849,
Distichodus rodolphi Günther, 1896.

Common Name :
English : Rough Castfish
Arabic: لفاش نيلى - لســان البقــر
(Lafash Nili - Lessan El Bakar).

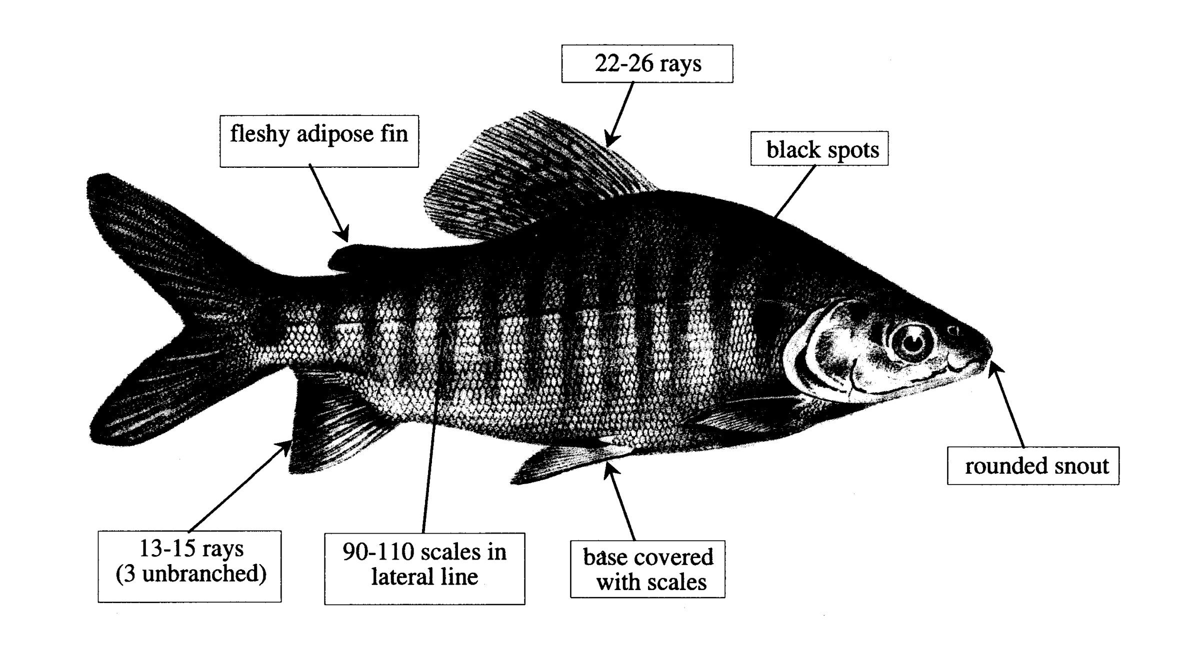
Status : Very rare.

Distribution :
Local : Upper Nile (Luxor and Aswan) and Lake Nasser.
World : Most of tropical Africa and the River Nile system.

Biology and Ecology :
-Usually it forms schools of few individuals in shallow waters.
-It feeds on snails, weeds, insects and crustaceans.
-Breeds in summer, moving upstream to suitable spawning sites.
-It may reach 80 cm in length.

Colour : back grey to silvery; dorsal fin is light blackish grey, darker at the tips and spotted with black spots.

Economic Importance : not known.



39- *Distichodus niloticus* (L.) لفاش نيلى - لسـان البقـر

40. *Distichodus rostratus* (Günther, 1864)

Synonyms : *Salmo niloticus* Linnaeus, 1762,
Salmo aegyptiacus Gmelin, 1788,
Characinus nefasch Lacepede, 1803,
Citharinus nefasch Rüppell, 1829,
Distichodus nefasch Cuvier & Valenciennes, 1849,
Distichodus martini Steindachner, 1870.

Common Name :
Arabic : لفـــاش بيـــوز (Lafash Bebouze).

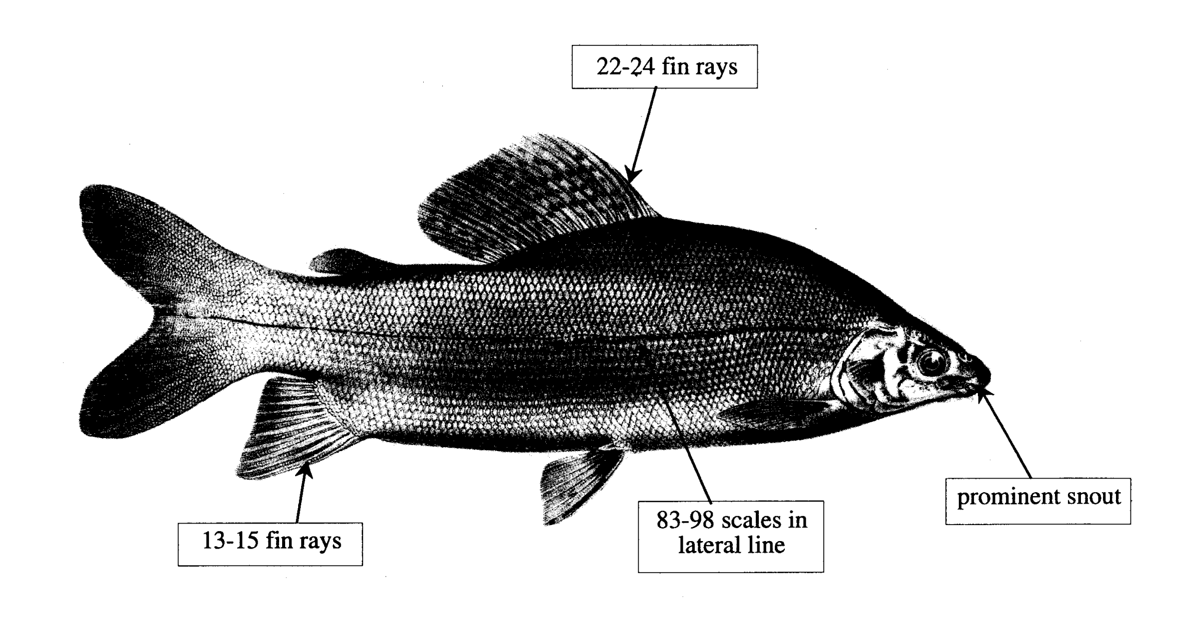
Status : Extinct, used to be caught in lower Nile, Beni Suef and Luxor (Boulenger, 1907).

Distribution :
Local : Extinct
World : River Nile system, Lake Victoria, Senegal, Niger, West Africa, Uganda, Lake Chad, Senegal and Gambia.

Biology and Ecology :
-It feeds on water weeds, vegetable debris, grass rootlets, filamentous algae and diatoms.
-The longest specimen measure 62 cm.
-It is closely related to *D. niloticus*, differeing only by its larger scales.

Colour : bluish grey in the upper part, whitish below.

Economic Importance : not known.



40- *Distichodus rostratus* (Gthr.) لفـــاش بيـــوز

41. *Distichodus engycephalus* (Günther, 1864)

Synonyms : none.

Common Name :

Arabic: **لفــاش حراشـــــا – لسان**

(Lefash Harasha - Lessan).

Status : Extinct, used to be caught from the Nile at Cairo (Boulenger, 1907).

Distribution :

Local : Extinct.

World : Khartoum, Blue Nile and Niger.

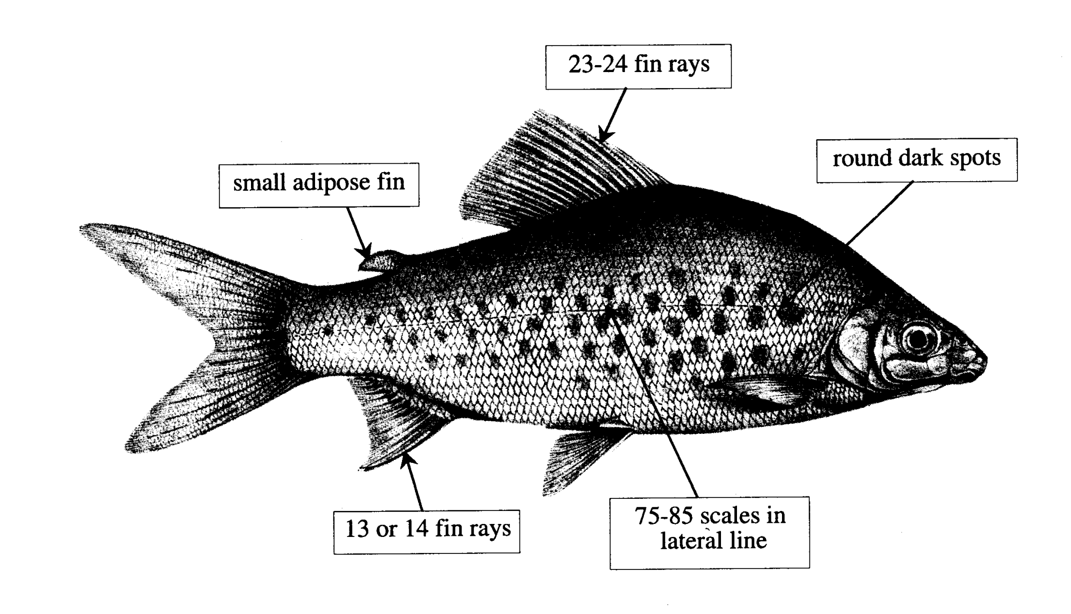
Biology and Ecology :

-Feeds on diatoms, filamentous algae, insects and plant material.

-Regular length 27 cm.

Colour : brown above, silvery white below, sides with numerous round dark spots.

Economic Importance : not known.



41- ***Distichodus engycephalus*** **(Gthr.) لسان - حراشـا لفاش**

Genus : *Nannocharax* **Günther, 1867**

Small, slender fishes with prominent vertical bars along the body and a caudal "eye" spot. The lateral line is complete. One species in Egypt.

42.*Nannocharax niloticus* (Joannis, 1835)

Synonyms : *Coregonus niloticus* Joannis, 1835.

Common Name :

English : Broadbar Citharine
Arabic : ملــخ نيلى - سمــك الملك
(Samak El Malek - Malkh Nili).

Status : Extinct, used to be caught from Beni Suef, Luxor and Aswan (Boulenger, 1907).

Distribution :

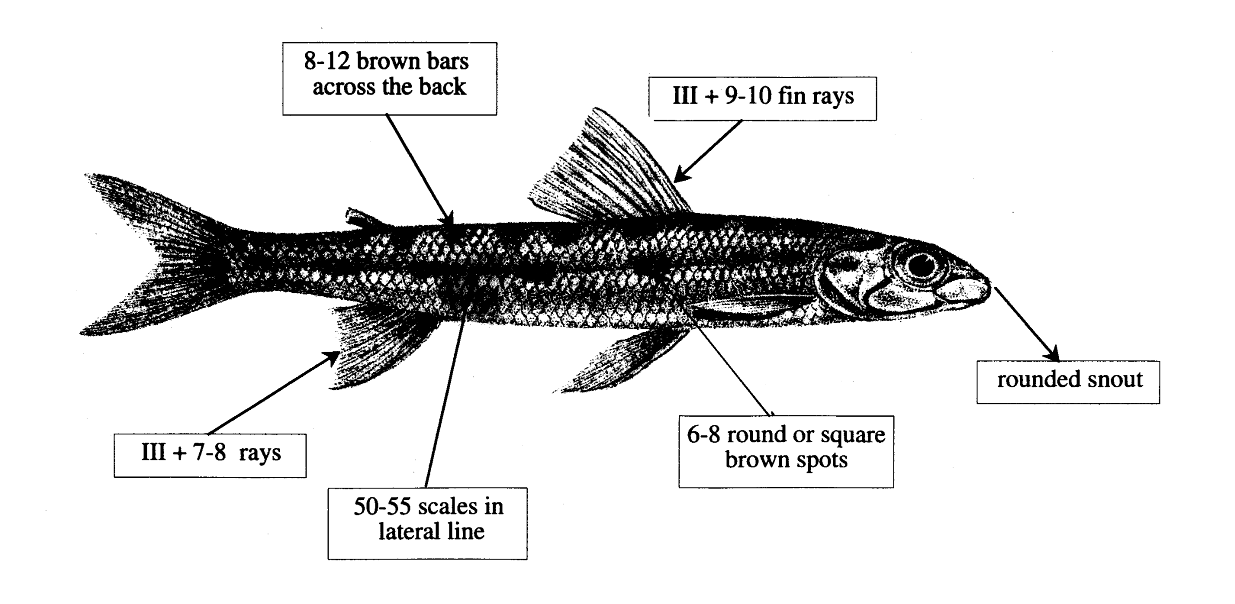
Local : Extinct.
World : White and Blue Niles, Congo, Gabon and Cameroon.

Biology and Ecology :

-Found in marginal vegetation, in flowing water.
-Picks small insects and other invertebrates from plant surfaces.
-Average length 6 cm.

Colour : pale olive above, white below. A silvery lateral streak just below the lateral line.

Economic Importance : not known.



42- *Nannocharax niloticus* (Joann.) ملـخ نيلى - سمـك الملك

FAMILY : CITHARINIDAE

Body is deep and narrow. Scales are moderate in size. Adipose fin is much longer than deep. Very small teeth. one genus and two species in Egypt.

Genus : ***Citharinus* Cuvier 1817**

Body is very much broad. Short snout. Moderately large adipose fin.

43.*Citharinus citharus* (Geoffroy, 1809)

Synonyms : *Serrasalmus citharus* Geoffroy, 1809,
Citharinus geoffroyi Cuvier, 1829,
Distichodus marnoi Steindachner, 1881.

Common Name :
English : Moon Fish
Arabic : قمـره (Kamarah)

Status : Very Rare.

Distribution :

Local : Lake Nasser and upper Nile; Luxor (Boulenger, 1907; Latif, 1974). It was caught from the Nile near Cairo and Giza but disappeard from these regions after the High-Dam construction.

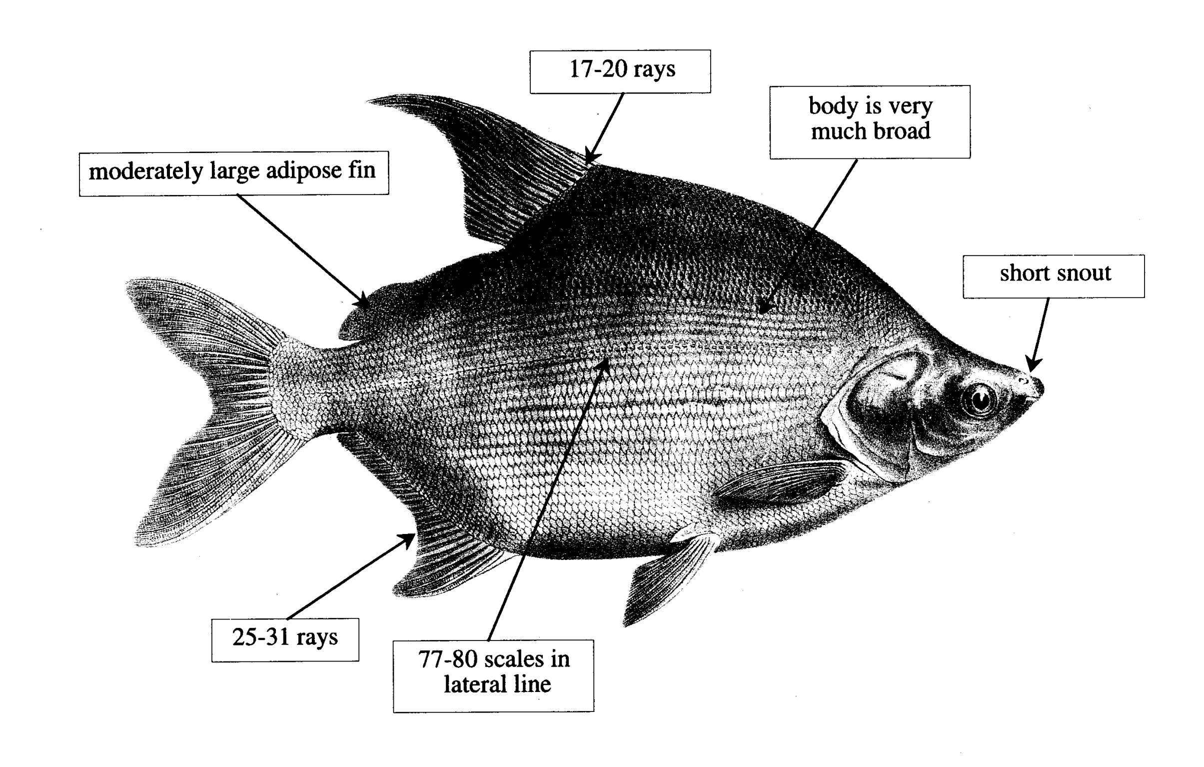
World: Upper Nile, Blue and White Niles, Chad basin, Senegal, Niger, Uganda and Gambia.

Biology and Ecology :

- Food : macroplankton especially crustaceans and diatoms.
- Usually it inhabits inshore waters of lakes, absent or rare in deeper open water.
- Food is mainly algae, diatoms, macroplankton especially crustaceans , sometimes bottom worms and small prey .
- Spawning takes place in swampy areas during the season of heavy rainfall.
- Length 45-60 cm, young fishes less than 20 mm long and are quite unlike adults.

Colour : generally silvery, the back greenish or purplish grey; pectoral white; other fins grey.

Economic Importance : marketable when caught.



43- ***Citharinus citharus*** **(Geoffr.) قمـره**

44. *Citharinus latus* Müller & Troschel, 1845

Synonyms : none

Common Name :

English : Moon Fish

Arabic: قمــره لاتس (Kamarah Latus)

Status : Rare.

Distribution :

Local : Lake Nasser and upper Nile; from Beni Suef southwards (Boulenger, 1907; Latif, 1974).

World : Niger, Senegal and Lower Nile to Bahr el-Jebel.

Biology and Ecology :

-Mud-swallowers.

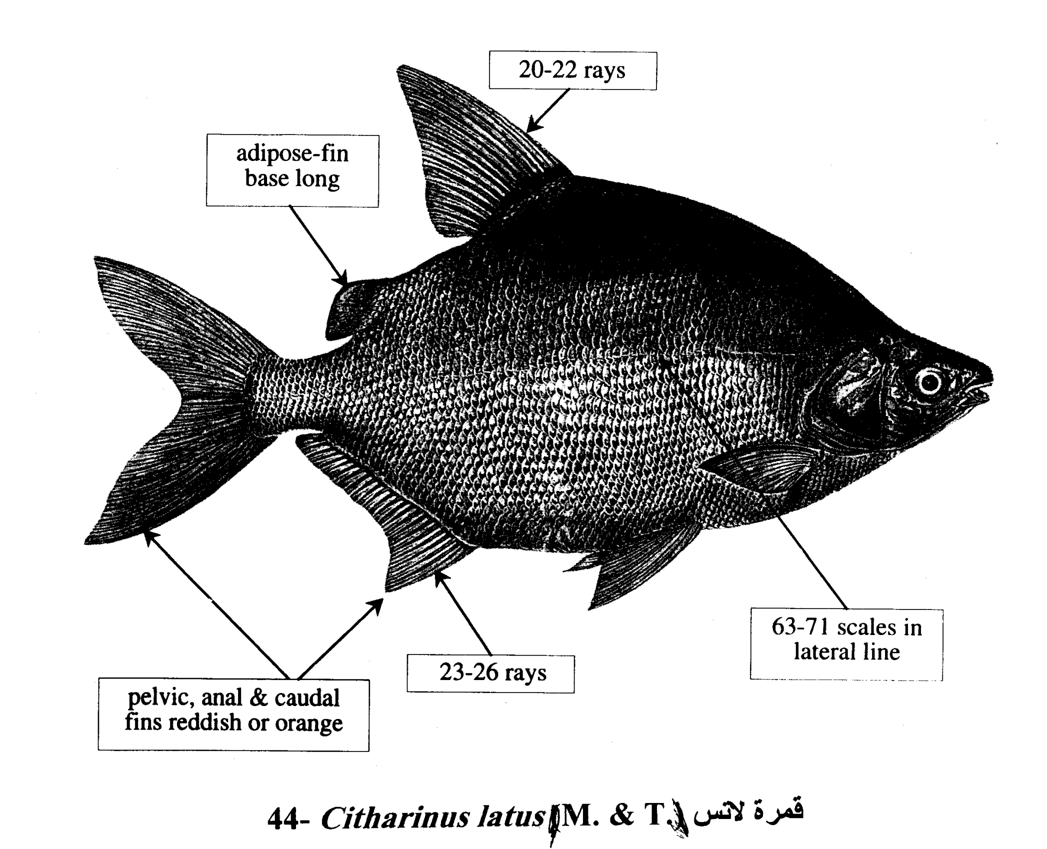
-It feeds on small prey, insects, cladocerans, microscopic algae and vegetation.

-Common in winter.

-Length : to 42 cm.

Colour : grey above, silvery white below. Horizontal dark grey lines may run between ventral and caudal fins.

Economic Importance : marketable when caught.



44- *Citharinus latus* (M. & T.) قمرة لاتس

Order SILURIFORMES

Catfishes

Pelvic fins abdominal. Adipose fin usually present. Scales absent. Mouth surrounded by barbles. It includes about 31 families, 400 genera and over 2200 described species.

FAMILY : BAGRIDAE

Bagrid catfishes

Dorsal and pectoral fins with strong spines. Dorsal fin is short. Gill membranes are not continuous across throat.

Genus : Bagrus Müller & Troschel 1849

4 pairs of barbels. Dorsal fin with one spine and 8 - 10 soft rays.

45. *Bagrus bajad* (Forsskål, 1775)

Synonyms : *Bagrus bayad* Forsskål 1775,
Silurus bajad Forsskål 1775,
Porcus bayad Geoffroy 1827,
Bagrus bayad Rüppell 1829,
Porcus docmac bayad (Forsskål 1775) [Jayaram 1966]

Common Name :

English : Forskals catfish
Arabic : بقـــر – بياض (Baiad - Bagar).

Status : Common.

Distribution :

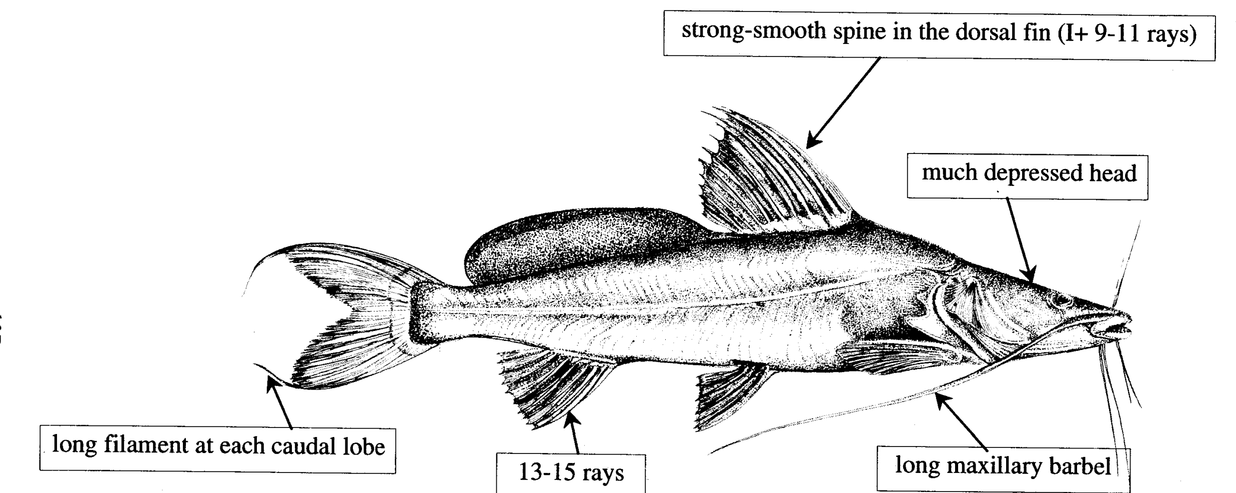
Local : Whole River Nile and Lake Nasser.
World: Sudan (Blue and White Niles), Chad basin, Senegal, Nigeria, Cameron, West Africa, Niger River, East Africa, Uganda (Lakes Albert and Rudolf); Ghana (Lake and River Volta).

Biology and Ecology :

-It spends nearly the whole of the daylight hours in the crevices of rocks and is therefore seldom seen. It lives in deep water.
-It feeds mostly on small fishes , insects and crustaceans. The percentage occurrence of fish increases with increase of fish length.The most preferable fish species are *Synodontis* sp., *Labeo* sp., *Alestex* sp. and *Tilapia* sp.
-Its spawning season extends from April to July.
-It grows to nearly 1 m.

Colour: silvery grey above, white beneath, fins colourless. Dark dots are sometimes scattered on the back, the adipose and the caudal fins.

Economic Importance : Well marketable. Its total production in 1996 was about 5826 tons, i.e. contributes about 9% of the total Nile catch (GAFRD, 1996).



45- *Bagrus bajad* (Forssk.) بياض - بقر

46. *Bagrus docmak* (Forsskål, 1775)

Synonyms : *Silurus docmak* Forsskål, 1775,
Porcus docmac Geoffroy, 1827,
Bagrus docmac Rüppell, 1829,
Bagrus koenigi Pietschmann 1932,
Porcus docmac docmac (Forsskål 1775) [Jayaram 1966]

Common Name :
English : Catfish
Arabic : بقـر دقماق (Bagar Dogmag).

Status : Common.

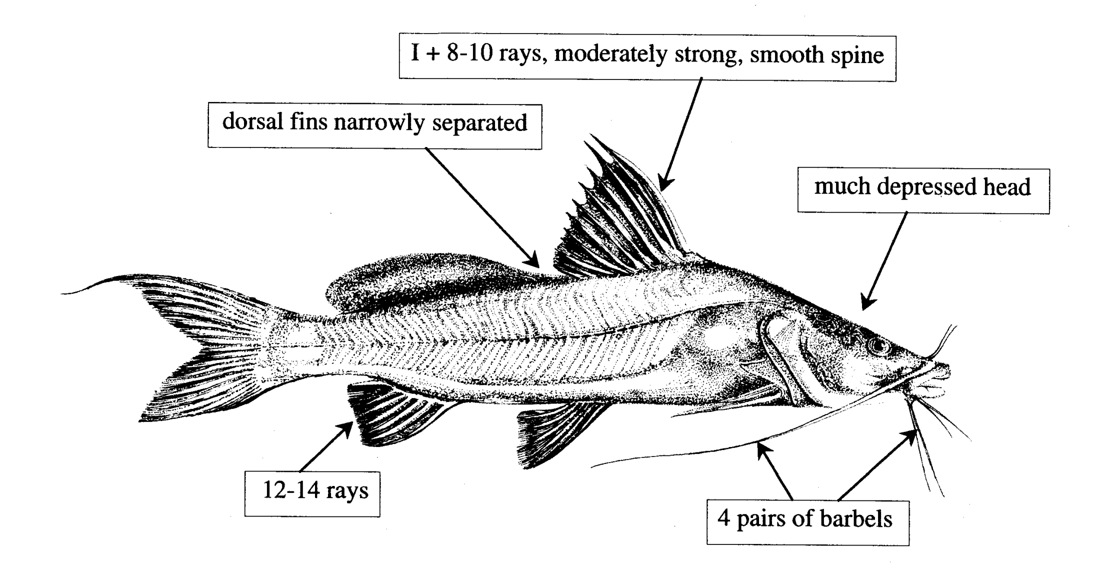
Distribution :
Local : From Nile Delta to Lake Nasser.
World : River Nile system to Lake Victoria, Blue Nile, Ethiopia, (Lake Stephanie), Lake Albert, Lake Rudolf, Somalia (River Ganana), Mosambique (River Bavuma), Kenya, Cameroon, Uganda (Lakes Victoria, Albert, Edward and George; River Samilki and Murchison and Nile Albert system). Gold Coast, Northern Nigeria, Ghana (Lake and River Volta) Lake Tanganyika.

Biology and Ecology :

- The fish feeds mainly on fish, insects, crustaceans and molluscs and to a minor extent on plants.
- Mature ovaries are seen in summer and there is a single long breeding season, extending from March to September.
- In Lake Nasser, spawning nests were seen in shallow waters in sandy bottom or rocks.
- The largest specimen caught measured 109 cm.

Colour : greyish blue to dark brownish olive above, creamy white below with dark spots on the back and adipose fin. It is darker in colour than *B. bajad*

Economic Importance : well marketable.



46- *Bagrus docmak* (Forssk.) بقر دقماق

47. *Bagrus degeni* Boulenger 1906

Synonyms : *Porcus degeni* Jayaram 1966.
Jayaram (1966) believes that it is a geographical subspecies of *docmac* endemic in Lake Victoria.

Common Name :
English : Catfish
Arabic : بياضة بقــر دوجينى (Bakar degeni).

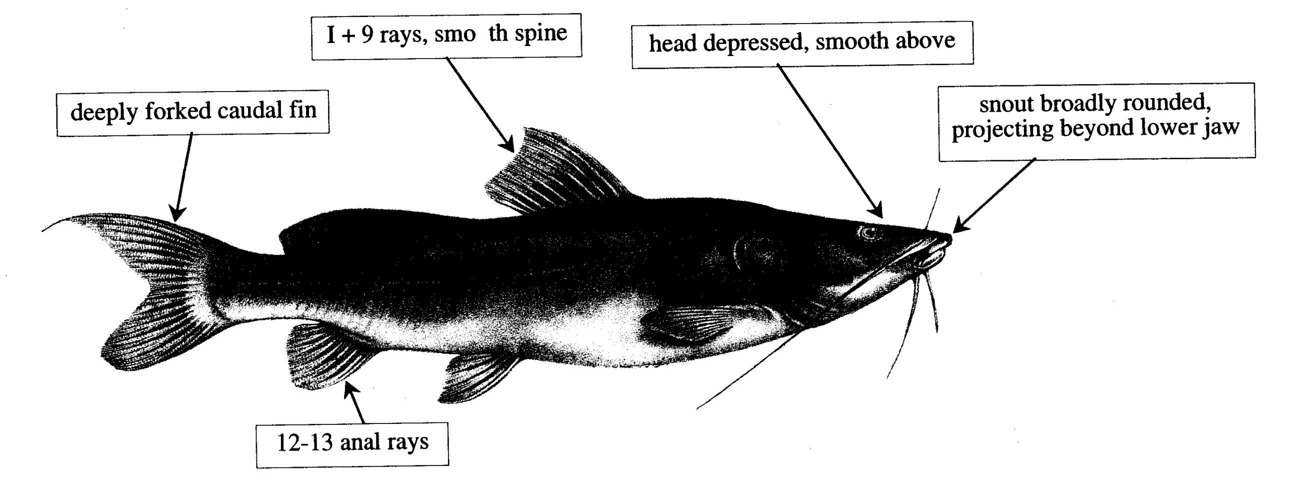
Status : very rare

Distribution :
Local : Lake Nasser, recentlly recorded in the lake by Mekkawy (1996) who collected four specimens (46 - 102 cm TL) during July 1993.
World : Entebbe, Sese Island Lake Victoria : Uganda. Ukerewe Island : Tanganyika.

Biology and Ecology :
-No available studies are carried out on this species and its identification is even build on examination of few specimens. However it seems to having nearly the same biology of *B. docmak.*
-Length : up to 49 cm (Boulenger 1906) to 1.02 m in Lake Nasser.

Colour : darker than *B. docmak.* Blackish brown or dark steel, blue above; whitish or brassy yellow beneath. Fins grey to blackish; iris dark with a vivid yellow ring.

Economic Importance : marketable when caught.



47- *Bagrus degeni* (Blgr.) بقر دوجینی

Genus : ***Chrysichthys* Geoffroy, 1809**

4 pairs of barbels. Caudal fin emarginate. Dorsal fin with one spine and 6 - 7 soft rays. 2 species in Egypt.

48.*Chrysichthys auratus* (Geoffroy, 1809)

Synonyms : *Pimelodus auratus* Geoffroy, 1809,
Porcus auratus Geoffroy, 1827,
Bagrus auratus Rüppell, 1835,
Chrysichthys macrops Günther, 1864.

Common Name :
English : Long Fin Catfish
Arabic : أبو ريـــاله فضى (Abu Riala Feddy).

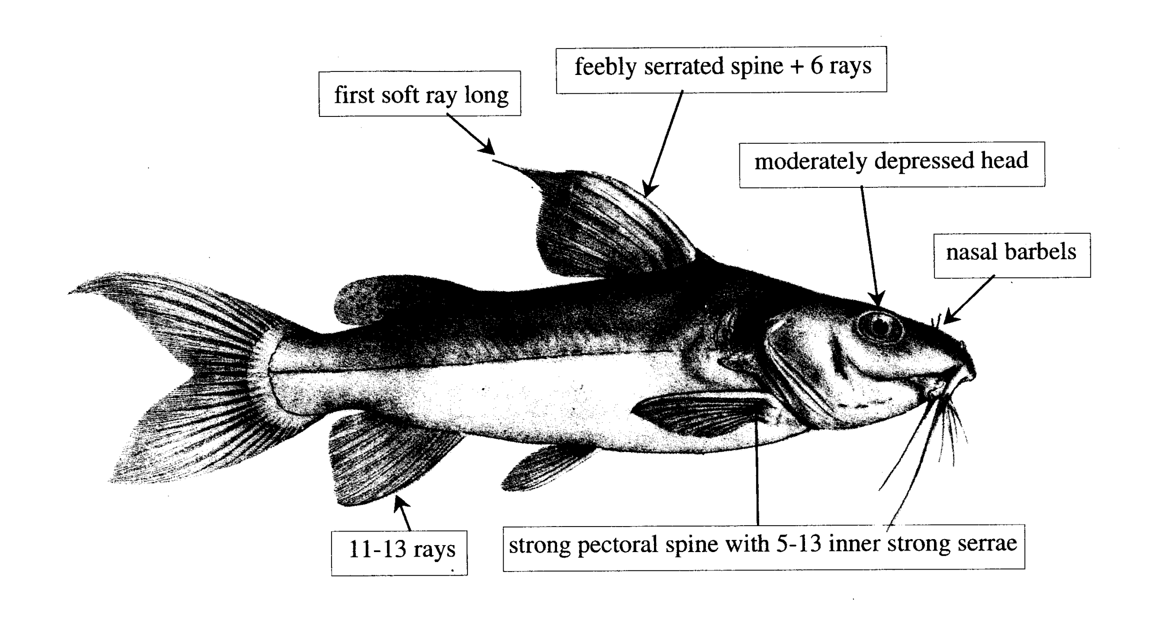
Status : Common.

Distribution :
Local : Whole River Nile, rare in Lake Nasser.
World : River Nile system, Senegal, Chad and Volta lakes.

Biology and Ecology :
-A bottom feeder; insects and crustaceans are the most dominant food items, molluscs,nematodes, fish, plants and bottom deposits are of minor importance.
-Spawning season extends from September to April.
-The longest fish caught 25 cm long.

Colour : grey to greenish above, silvery white beneath. Pectoral, ventral and anal fins are tinged with pale yellowish orange colour.

Economic Importance : marketable.



48- *Chrysichthys auratus* (Geoffr.) أبو رياله فضى

49.*Chrysichthys rueppelli*, Boulenger, 1907

Synonyms : *Chrysichthys auratus*, Günther, 1864.

Common Name :

Arabic : أبـــو ريـــاله روبل – كـــوركـــر شامى

(Abu Rialah Rupel - Kurkor Shamy).

Status : Rare.

Distribution :

Local : Whole River Nile; very rare in Lake Nasser.

World : River Nile system.

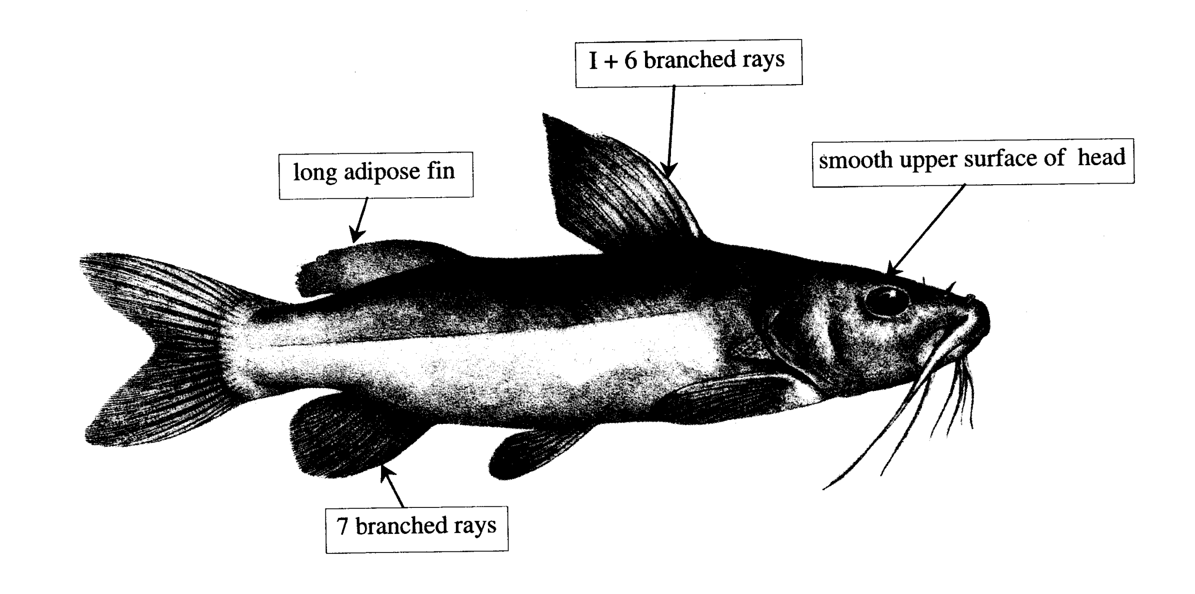
Biology and Ecology :

-Mainly a bottom feeder, feeding on small fish, chironomid larvae, tiny molluscs and vegetable matter.

-Average length 23 cm.

Colour : it is comparable to *C. auratus*.

Economic Importance : marketable when caught.



49- *Chrysichthys rueppelli* (Blgr.) أبـو ريـالـه روبل - كـوركـر شامى

Genus : ***Clarotes* Kner, 1855**

4 pairs of barbels. 5 - 7 soft dorsal-fin rays. In adults, adipose fin with a stiff spine. one species in Egypt.

50.*Clarotes laticeps* (Rüppell, 1829)

Synonyms : *Pimelodus laticeps* Rüppell, 1829,
Bagrus nigrita Cuvier & Valenciennes, 1839,
Bagrus laticeps Heckel, 1849,
Clarotes heuglinii Kner, 1855,
Octonematichthys nigrita Bleeker, 1858,
Clarotes laticeps Günther, 1864,
Chrysichthys cranchii Steindachner, 1870,
Chrysichthys nigrita Sauvage, 1880.

Common Name :
English : Spiny Catfish
Arabic : أبــو مســيكه (Abu Messikah).

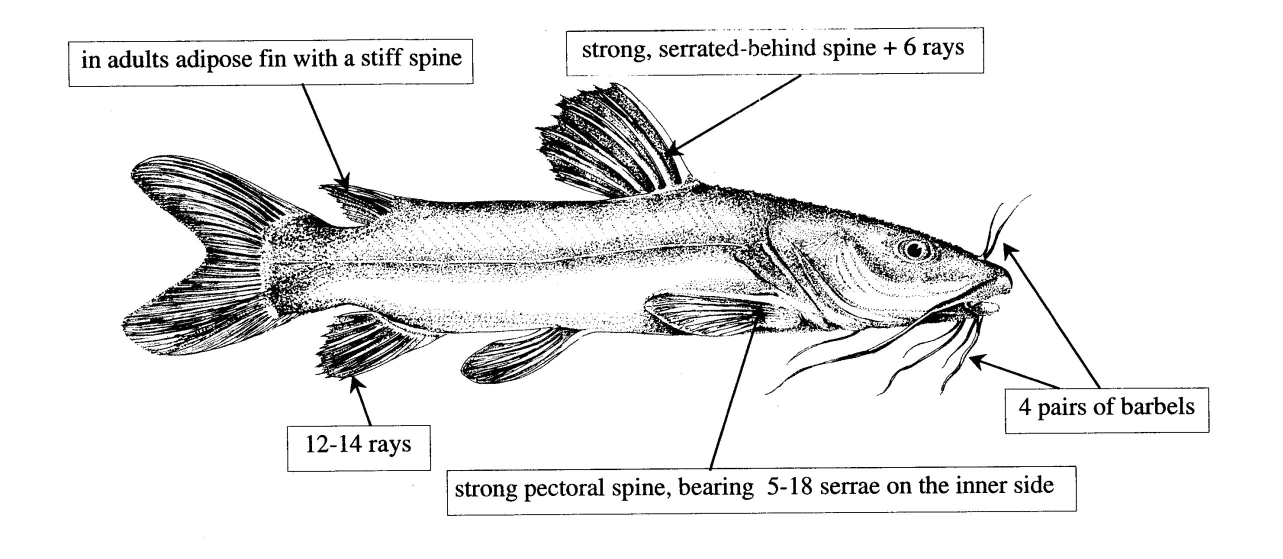
Status : Rare.

Distribution :
Local : Lake Nasser.
World: White and Blue Niles, Niger, Senegal, Lake Chad, Tanzania, Kenya, East Africa: Tama River, Tsava River, Ghana : Lake Volta.

Biology and Ecology :
-Found in shallow water.
-It feeds on fishes, crustaceans, molluscs, insects and plant material.
-Spawning season extends from April to November.
-Maximum length 80 cm.

Colour : brown above, silvery white below with a brownish band along each of caudal lobes; head bluish yellow.

Economic Importance : marketable when caught.



50- *Clarotes laticeps* (Rüpp.) أبو مسيكه

Genus : ***Auchenoglanis* Günther 1856**

3 pairs of barbles. Dorsal fin with 7 or 8 soft rays. Head is large, and body is heavily built. 2 species in Egypt.

51. *Auchenoglanis biscutatus* (Geoffroy, 1827)

Synonyms : *Pimelodus biscutatus*, Geoffroy, 1827,
Auchenaspis biscutatus, Bleeker, 1863,
Auchenaspis biscutatus, Günther, 1864,
Auchenoglanis biscutatus, Boulenger, 1902.

Common Name :

English : Black Spotted Catfish

Arabic : كرفش شـــال - زمـــر - دقمـــان

(Krefsh Shaall - Zomar - Dokman).

Status : Rare.

Distribution :

Local : Lower Nile and very rare in Lake Nasser.

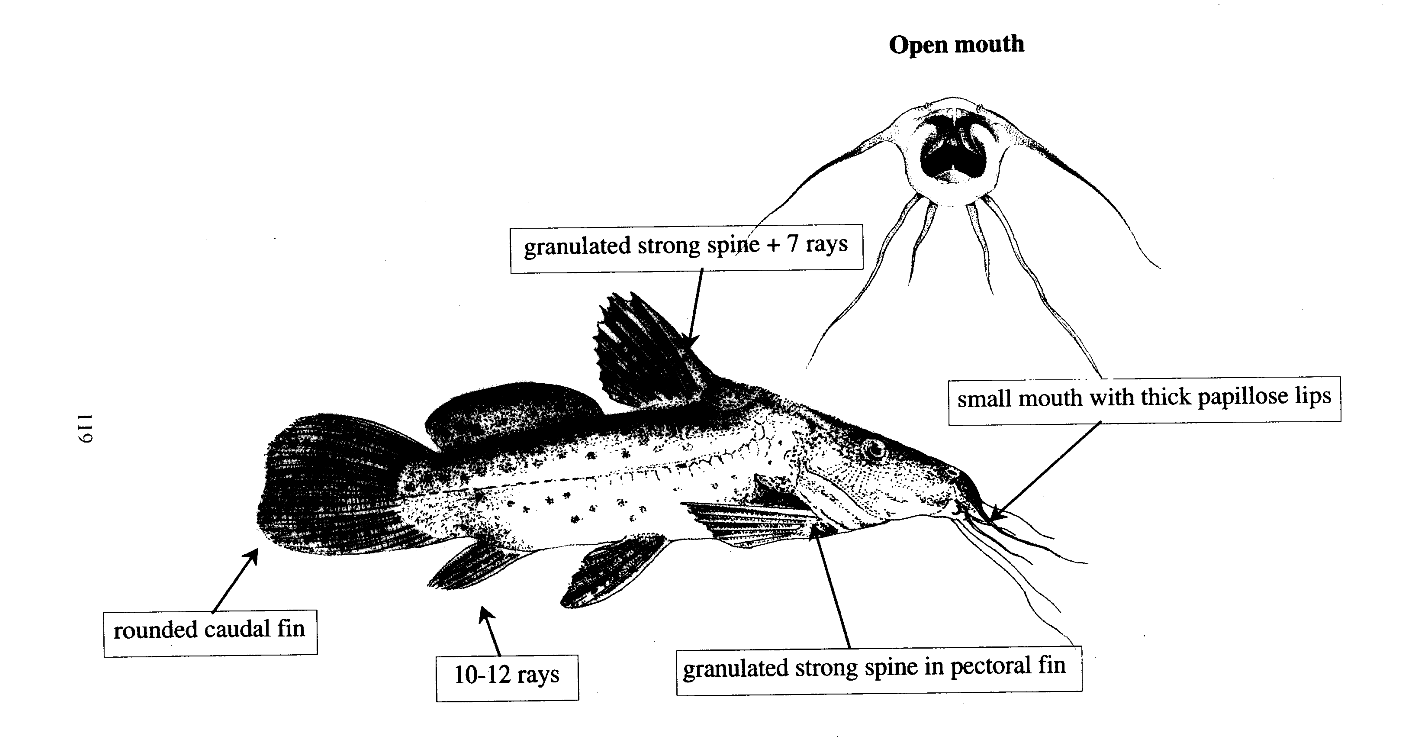
World : Nigeria, White Nile.

Biology and Ecology :

-It lives in shallow regions near the shore.
-A bottom feeder, feeds mainly on insects, fish, crustaceans, molluscs, worms, nematodes and plant materials.
-Largest specimen recorded in Lake Nasser was 48 cm long.

Colour : uniform olive green, with small round scattered blackish or brownish spots, lower side white.

Economic Importance : marketable when caught. It is believed that *Auchenoglanis* sp. is a third class edible fish. Some authors (Worthington, 1942; Copley, 1952) reported that the flesh is poisonous.



51- *Auchenoglanis biscutatus* (Geoffr.) كرفش شـال

52.*Auchenoglanis occidentalis*, (Cuvier & Valenciennes, 1840)

Synonyms : *Pimelodus occidentalis* Cuvier & Valenciennes, 1840,
Auchenaspis biscutatus Steindachner, 1870,
Oxyglanis sacchii Vinciguerra, 1898,
Auchenoglanis biscutatus Boulenger, 1901,
Auchenoglanis occidentalis, Boulenger, 1902.

Common Name :
English : Spotted Catfish
Arabic : كرفش حمار الحوت
(Krefsh Homar El hoot).

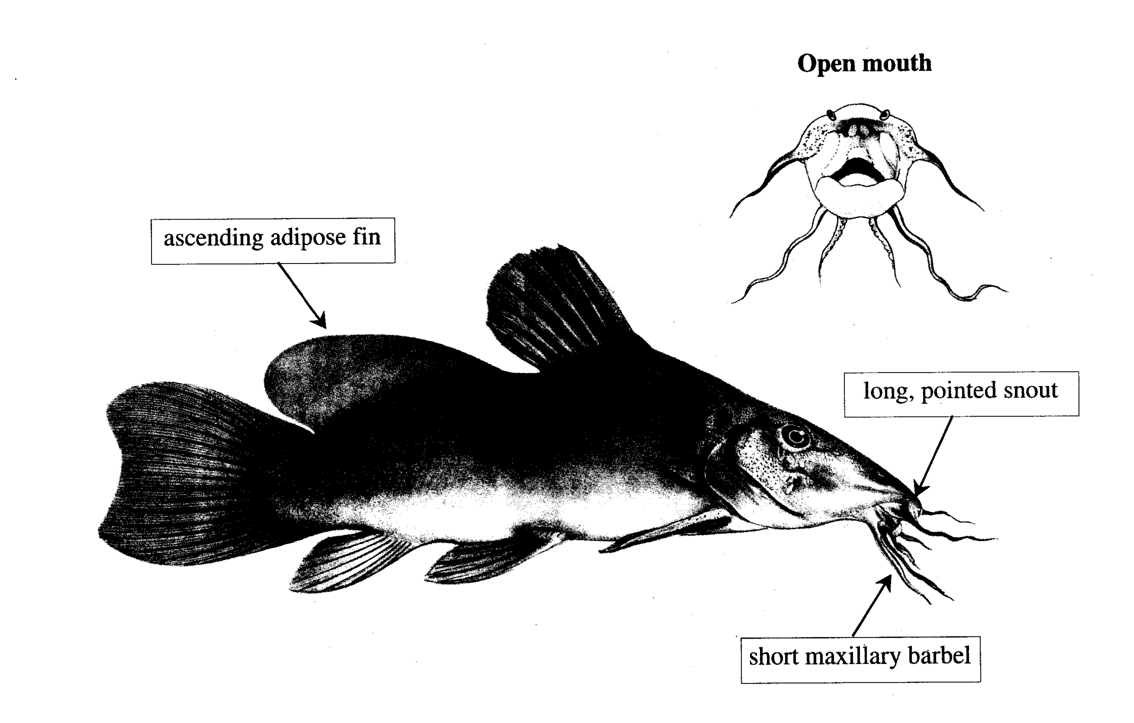
Status : Rare.

Distribution :
Local : Upper Nile (Luxor and Aswan) and Lake Nasser.
World : Sudan, Nigeria, Congo, Tanganyika, Lake Chad, Senegal and Uganda. Allover Eastern and Southern Africa.

Biology and Ecology :
- -A bottom feeder, feeds mainly on insects. crustaceans and to a lesser extent molluscs, nematode larvae and plants, in addition to mud and bottom deposits.
- -Breeding season extends from May to October.
- -This species is distinguished from *A. biscutatus* by its less pointed snout, shorter maxillary barbel which is shorter than the outer mandibular barbel and does not extend back beyond the eye.
- -Largest specimen caught from Lake Nasser measured 30 cm long and in Sudan more than 1 m.

Colour : uniform olive or brown, but some are spotted with dark brown or blackish spots; these spots when present are larger than in *A. biscutatus*, often very large on the dorsal and caudal fins, where they are separated by a narrow network of the pale ground-colour.

Economic Importance : marketable when caught, but considered a third-class edible fish.



52- *Auchenoglanis occidentalis* (C. & V.) كرفش حمار الحوت

FAMILY : SCHILBEIDAE

Schilbeid (Butter) Catfishes

Depressed head with large mouth, short deep abdomen and compressed, tapered body with a long anal fin-reflects the midwater life style. Dorsal fin is very short, with a sharp spine and less than 10 rays. Adipose fin is often small. In Africa, ther are 5 genera and about 34 species; 2 genera and 4 species occur in Egypt.

Genus : ***Schilbe*** **Oken, 1817**

6 soft rays in dorsal fin. The genus includes 22 species in tropical African waters; 3 species are known in Egypt.

53.*Schilbe* (*Eutropius*) *niloticus* (Rüppell, 1829)

Synonyms : *Hypophthalmus niloticus* Rüppell, 1829,
Eutropius niloticus Rüppell, 1829,
Chilbe zerege Rifaud, 1830,
Schilbe hasselquistii Cuvier & Valenciennes, 1839,
Eutropius adansonii Günther, 1870,
Eutropius altipinnis Steindachner, 1894.

Common Name :

English : Fatty Finned-Butter Catfish
Arabic : شلـــبه – ذرية نيلى (Shelbah - Zarieh Nili).

Status : Rare.

Distribution :

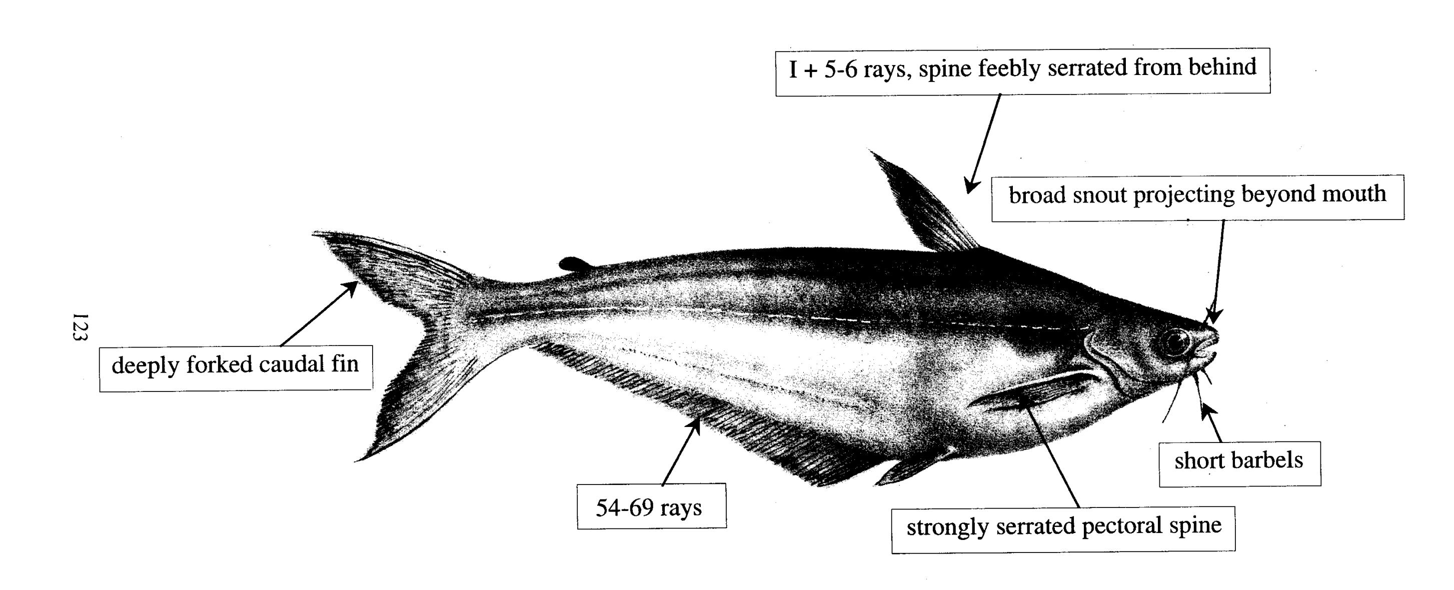
Local : Whole Nile and Lake Nasser.
World : White and Blue Niles, Lake Albert, and the rivers of West Africa.

Biology and Ecology :

-It is more frequent during the flood season, mainly in bays and shallow inshore waters.
-It feeds on fish fry, worms, insects and crustaceans.
-It eats also water weeds mainly *Eichhornia crassipes.*
-In flood waters (August), sexually mature females are either ripe or spent.
-It grows up to 44 cm long.

Colour : back is olive with bronze-gold, caudal fin yellow edged with blackish, venteral and anal fins white.

Economic Importance : marketable when caught.



53- ***Schilbe (Eutropius) niloticus*** **(Rüpp.) شـلبة - ذريه نيلى**

54.*Schilbe (Schilbe) mystus* (Linnaeus, 1758)

Synonyms : *Silurus mystus* (Linnaeus, 1762),
Schilbe intermedius Rüppell, 1832,
Eutropius depressirostris Peters 1855,
Schilbe senegalensis Steindachner, 1870,
Schilbe emini Pfeffer 1896,
Schilbe dispila Günther, 1896.

Common Name :
English : Silver catfish
Arabic : شلبه أصلى (Shelbah Asslie).

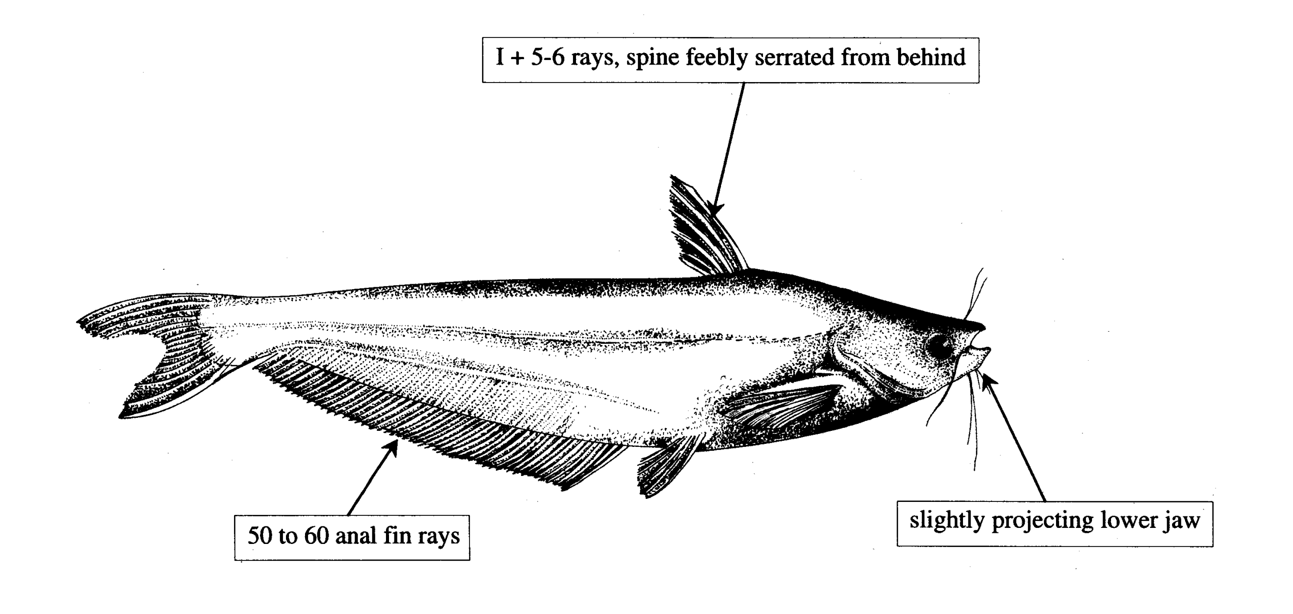
Status : Moderately common.

Distribution :
Local : Whole River Nile (from Nile Delta to Lake Nasser).
World: Lake Nubia, Senegal, Congo, Lake Victoria, eastern rivers, inland drainge water of Tanzania, Chad basin, Congo and Zambia.

Biology and Ecology :
- Found mainly in shallow inshore waters.
- It feeds on diatoms, arthropods, insects and small fish including bottom- living and planktonic organisms.
- Mature gonads are seen in summer. Males and females reach maturity at a length of 14 and 16.5, respectively.
- Spawning occurs during September and October.
- Generally more active at night or in subdued light.
- Lives for 6 - 7 years.
- Grows to a length of 34 cm.

Colour : silvery, darker on the back, a blackish spot on each side above the pectoral fin. Dorsal, and pectoral fins sometimes blackish.

Economic Importance : well marketable when caught.



54- *Schilbe (Schilbe) mystus* (L.) شـــلبة أصلى

55. *Schilbe (Schilbe) uranoscopus* Rüppell, 1829.

Synonyms : *Schilbe isidori* Cuvier & Valenciennes, 1839.

Common Name :
English : Butter Catfish
Arabic : شـــلبــه عربى – شلبه أبوقطيف
(Shelbah Arabi - Shelbah Abu Katif).

Status : Rare.

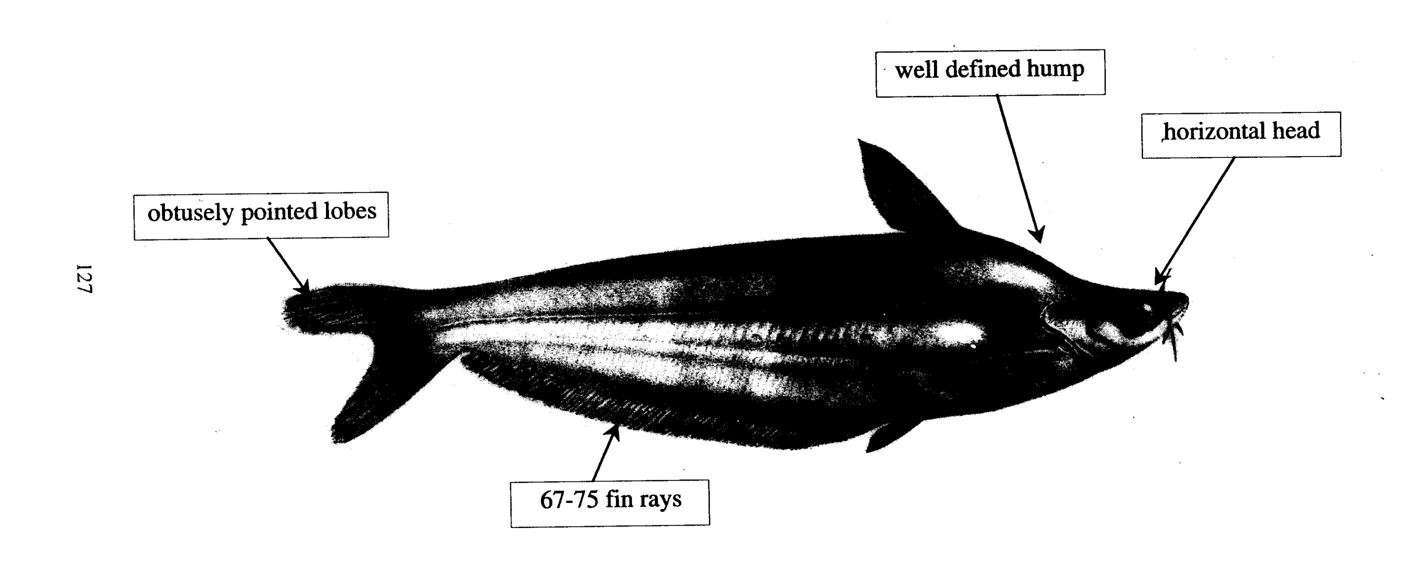
Distribution :
Local : Upper Nile and Lake Nasser.
World : Blue and White Niles and Ganana River.

Biology and Ecology :

- It is a surface dwelling fish where it feeds mostly on insects. It feeds also on crustaceans and small fishes and to a minor extent on molluscs..
- Females and males attain maturity at a length of 16.8 and 25.2, respectively.
- Maturity is attained during July and August and spawning takes place during August and September.
- Spent females are frequent in turbid waters of the flood during August.
- It grows to 45 cm in length.

Colour : silvery back steel-blue, fins especially in adults flesh coloured.

Economic Importance : marketable when caught.



55- *Schilbe (Schilbe) uranoscopus* Rüpp. شلبة أبوقطيف - شلبة عربى

Genus : ***Siluranodon* Blkr.**

Projecting lower jaw. Feeble, smooth pectoral spine.

56.*Siluranodon auritus* Geoffroy, 1827

Synonyms : *Silurus auritus* Geoffroy, 1827,
Schilbe auritus Rüppell, 1829.

Common Name :
Arabic : شـلبه ودنـه أصلى
(Shelbah Wednah Asslie).

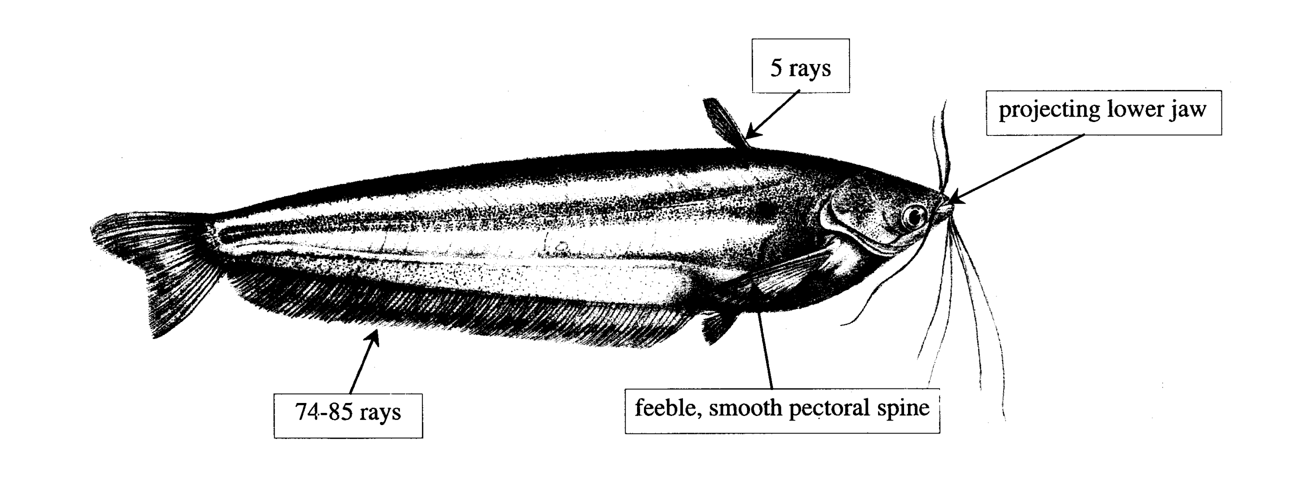
Status : Rare.

Distribution :
Local : Lake Nasser, used to be caught from Delta, Cairo, Luxor and Aswan (Latif, 1974).
World : Sudan, Lake Nubia, White Nile.

Biology and Ecology :
- Spawning takes place in summer.
- Largest specimens are about 18 cm long.

Colour : silvery, a red spot on the gill cover, a distinct dark blotch behind the shoulder, caudal fin edged black, anal fin speckled with blackish spots.

Economic Importance : marketable when caught.



56- *Siluranodon auritus* Geoffr. شـلبة ودنة أصلى

FAMILY : CLARIIDAE

Airbreathing and Labyrinth Catfishes

They are easily recognised by their bony, helmet like head and elongated body with long dorsal and anal fins, which lack spines. Caudal fin is rounded. The family includes 12 African genera and 74 species, with 2 genera and 4 species in Egypt.

Genus : ***Clarias*** **Gronovius, 1763**

Eye with free border . Dorsal and anal fins are separated from caudal fin. Air breathing organs are well developed. In Africa 32 species are recognized; 2 occur in Egypt.

57.*Clarias anguillaris* (Linnaeus, 1758)

Synonyms : *Silurus anguillaris* Linnaeus, 1762,
Macropteronotus charmuth Lacépède, 1803,
Macropteronotus anguillaris Rüppell, 1829,
Clarias hasselquistii Cuvier & Valenciennes, 1840,
Clarias parvimanus, Günther, 1869.

Common Name :
English : Eel Catfish.
Arabic : حـوت – قرمـوط زفـلوط
(Hott - Karmout Zaflout).

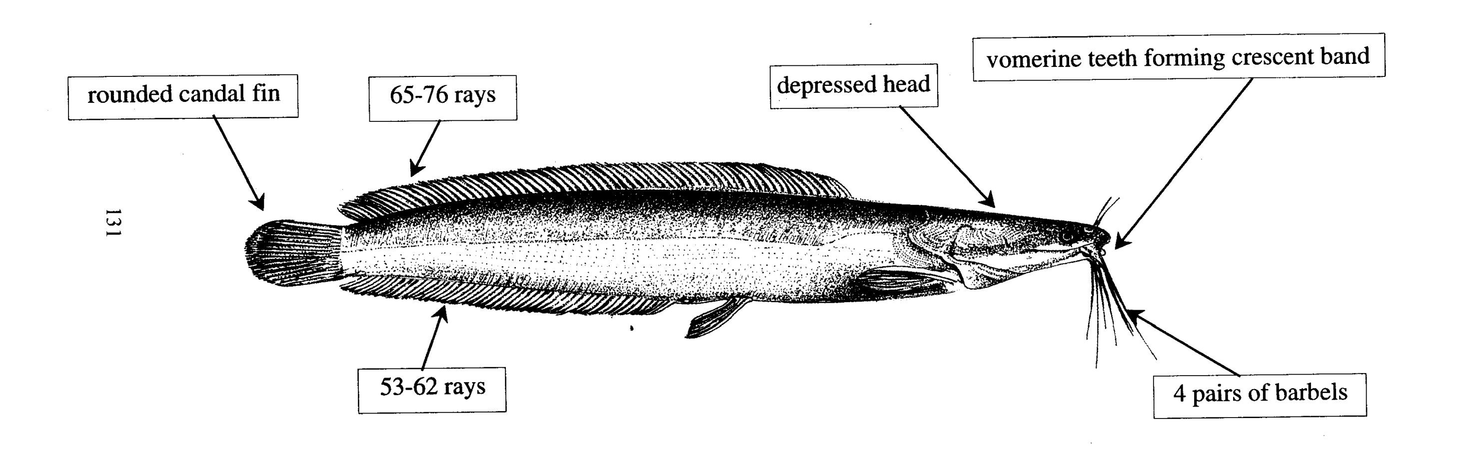
Status : Rare.

Distribution :
Local : Lower and upper Nile, very rare in Lake Nasser.
World : Restricted to the Nile system including Lake Victoria.

Biology and Ecology :
- -It lives mainly in deep waters, in the muddy or semi-muddy bottom.
- -It occurs throughout the year in the freshwater regions of Lake Manzala.
- -It feeds on molluscs, crustaceans, fish scales, diatoms and mud.
- -It reaches a considerable length; 75 cm long.

Colour : upper side dark brown, lower white. A dark band on each side of the head's lower surface. Fins dark, edged yellow or white.

Economic Importance : marketable when caught.



57- *Clarias anguillaris* (L.) حوت - قرموط زفلوط

58. *Clarias gariepinus* (Burchell, 1822).

Synonyms : *Silurus anguillaris*, Russell, 1794,
Macropteronotus charmuta Lacepede, 1803,
Heterobranchus anguillaris Geoffroy, 1827,
Garmout lazera Rifaud, 1830,
Clarias lazera Cuvier & Valenciennes, 1840,
Clarias mossambicus Peters, 1852,
Clarias capensis Huxley, 1861,
Clarias macracanthus Günther, 1883,
Clarias guentheri Pfeffer, 1896.

Common Name :

English : Sharptooth Catfish.

Arabic : قرموط لازير - حوت (Karmout Lazeer - Hotte).

Status : Common.

Distribution :

Local: Most of freshwater bodies; lower and upper Nile, freshwater regions of coastal lakes and Lake Nasser.

World: River Nile system, Syria, Lake Albert, Lake Edwards, Chad, Senegal, Nigeria and Congo.

Biology and Ecology :

-It tolerates a wide range of pollution.

-Completely omnivorous, feeding on fish, insect larvae, molluscs, planktonic organisms and water weeds.

-Breeds in summer and eggs are laid in vegetation.

-Lives for 8 or more years.

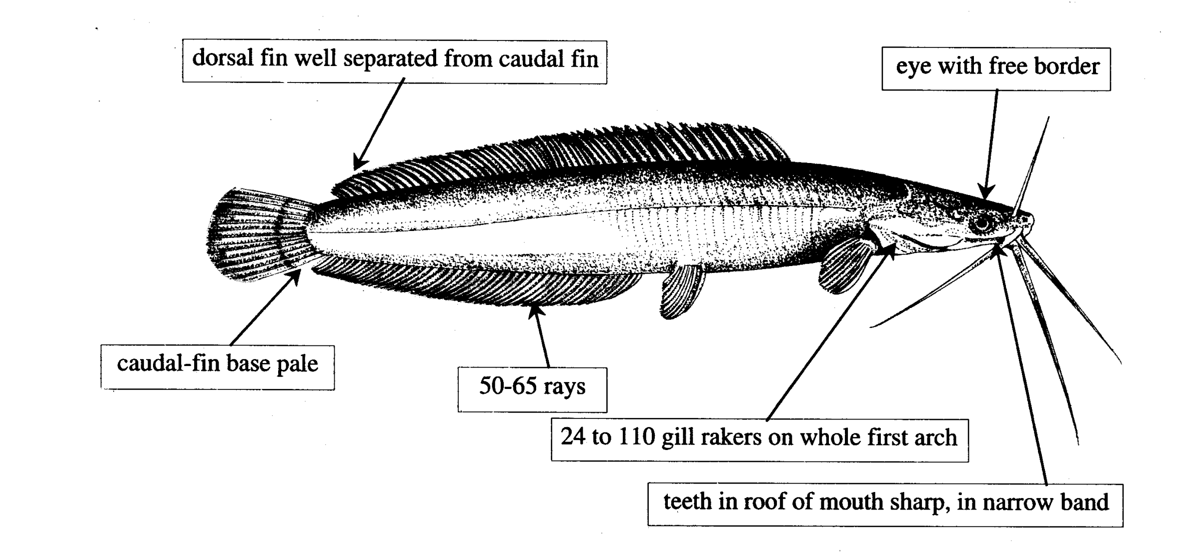
-It attains a considerable size in Lakes Nasser and Wadi El-Rayan and specimens up to 110 cm long were recorded.

Colour : greyish olive to olive brown to blackish above, white or greyish beneath.

Economic Importance :

-One of the most important freshwater fishes in Egypt and Africa.

-Well marketable. Becoming important in aquaculture. Total production in 1996 from the River Nile only about 11,310 tons; i.e. contributes about 17.5 % of the total Nile catch in Egypt (GAFRD,1996).



58- ***Clarias gariepinus*** **(Burch.)** **حوت - قرموط لازير**

Genus : ***Heterobranchus* Cuvier 1817**

59.Heterobranchus bidorsalis Geoffroy, 1827

Synonyms : *Heterobranchus geoffroyi* Cuvier & Valenciennes, 1844,
Heterobranchus senegalensis Cuvier & Valenciennes, 1869,
Heterobranchus intermedius Günther, 1864.

Common Name :
English : Eel-like Fattyfin Catfish
Arabic : قـرمـوط – كـركـور حالا (Karkor Haleh- Garmout).

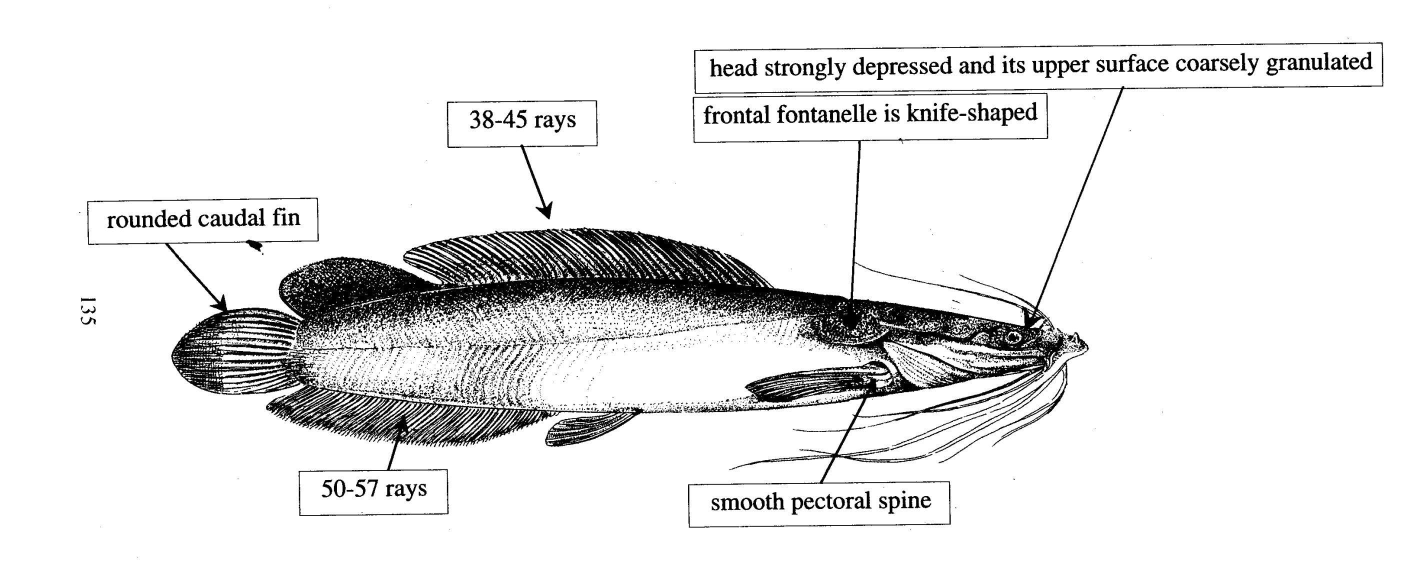
Status : Rare.

Distribution :
Local : Upper Nile and very rare in Lake Nasser.
World : White Nile, Chad basin, Senegal and Nigeria.

Biology and Ecology :
- Found in turbulent or fast running streams.
- It feeds on fish, molluscs and crustaceans.
- This species attains a considerable size (over 120 cm).

Colour : dark olive above and whitish beneath. Dorsal adipose and caudal fins edge dull oranged-red.

Economic Importance : marketable when caught.



59- *Heterobranchus bidorsalis* (Geoffr.) كركور حالا - قرموط

60.*Heterobranchus longifilis* Valenciennes, 1840

Synonyms : *Heterobranchus laticeps* Peters, 1852.

Common Name :

English : Vundu

Arabic : كـــركور أصلى – قرمـــوط

(Karkour assli - Garmout).

Status : Rare.

Distribution :

Local : Lower Nile (Cairo) and sometimes from Upper Nile (Luxor and Aswan) and very rare in Lake Nasser.

World: Nile system, Nigeria, Congo, Zaire basin, Malagarazi River, Uganada: Murchison Nile; LakeEdward, Gambia, Zambezi; Lakes Chad and Tanganyika.

Biology and Ecology :

-Feeds on bottom animals; invertebrates, insects or any available food when small, fish and other small vertebrates when large.

-Most active at night.

-Breeds in summer; eggs and juveniles found among plant roots in shallow water.

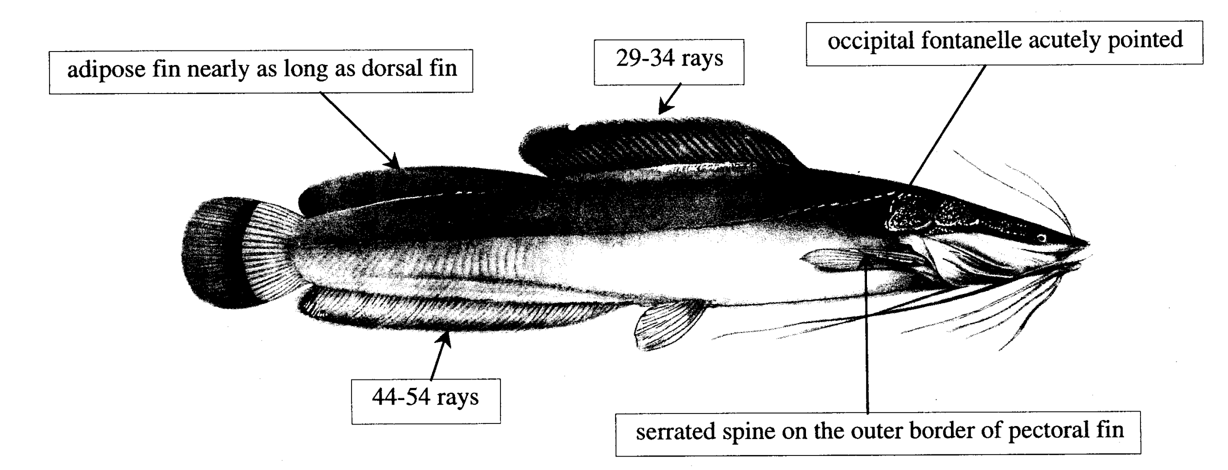
-Lives for 12 or more years.

-It is caught from deep water by trammel or sinking gill-nets.

-Maximum length 1.5 m.

Colour : dark olive above and whitish beneath. A dull orange-red edge to the dorsal adipose and caudal fins.

Economic Importance : marketable when caught.



60- *Heterobranchus longifilis* Val. **كركور أصلى - قرموط**

FAMILY : MALAPTERURIDAE

Electric Catfishes

Rayed dorsal fin is absent. No spine in pectroal fin. Adipose fin is present.

Genus : *Malapterurus* Lacépède, 1803

They have a rotund, bloated appearance. Their electrogenic organ is derived from muscles and covers most of the body. Three species have been described, one in Egypt.

61.*Malapterurus electricus* (Gmelin, 1789)

Synonyms : *Raja torpedo* Forsskål, 1775,
Silurus electricus Gmelin, 1789,
Malapterurus electricus Lacépède, 1803,
Malapterurus beninensis And. Murray, 1855.

Common Name :

English : African **Electric Catfish**.
Arabic : رعاش افريقى – رعاد
(El Raash - El Raade).

Status : Rare.

Distribution :

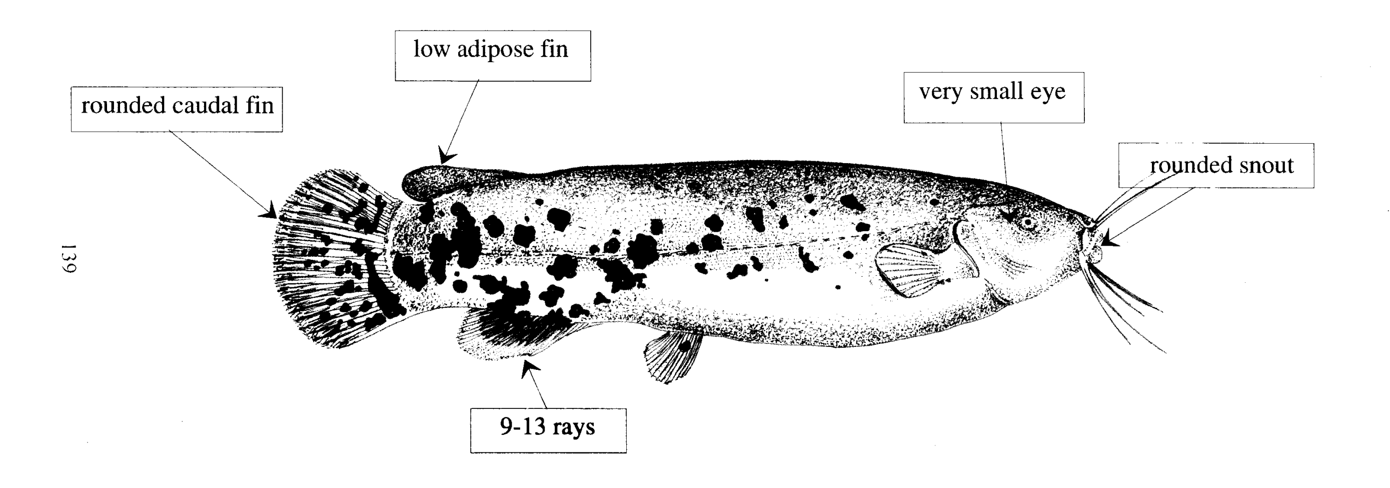
Local : Lower and Upper Nile and Lake Nasser.
World: Niger, Senegal, Blue Nile, Gabon, West Africa, Congo, Lake Tanganyika and middle and lower Zambia.

Biology and Ecology :

-It lives in shallow waters, with muddy or sandy bottom neighbouring rocky areas, in fast flowing waters.
-Capable of generating 300- 400 volts from large individuals and can produce a powerful electric shock. Dermal electric organ derived from body muscles.
-It feeds mainly on bottom worms, plants and animal debris.
-Forms pairs and breeds in excavated cavities or holes.
-Lives for 10 years or more.
-Largest specimen caught from Lake Nasser 70 cm long.

Colour : brownish above, white beneath, with black blotches.Caudal fin with a dark band close to the orange, fin border is reddish; pectoral and ventral fins are bright red.

Economic Importance : of minor commercial importance.



61- *Malapterurus electricus* (Gm.) رعاش أفريقى - رعــاد

FAMILY : MOCHOKIDAE

Squeakers and Upside-down Catfishes

The family includes 10 genera and about 170 species.They have complex mouths and strong spines in the dorsal and pectroal fins. Central lower barbels are branched; mouth with lips modified to form a sucker. 4 genera and 7 species are known in Egypt.

Genus : ***Synodontis*** **Cuvier, 1817**

Popularly known as squeakers on account of the sounds they make when removed from the water. Mandibular barbels are branched. Large sharp dorsal and well-barbed pectoral fin spines. A large genus with over 100 species, 3 in Egypt.

62. *Synodontis schall* (Bloch-Schneider, 1801)

Synonyms : *Silurus schall* Bloch-Schneider, 1801,
Pimelodus clarias Geoffroy, 1809,
Synodontis clarias Geoffroy, 1827,
Synodontis arabi Cuvier & Valenciennes, 1840,
Synodontis schall Hyrtl, 1859,
Synodontis smithii Günther, 1896,
Hemisynodontis schall Bleeker, 1863,
Synodontis smithii Günther, 1896.

Common Name :
English : Shield-head Catfish
Arabic : قرقور شال – شيلان (Gargour Shaal - Shilane).

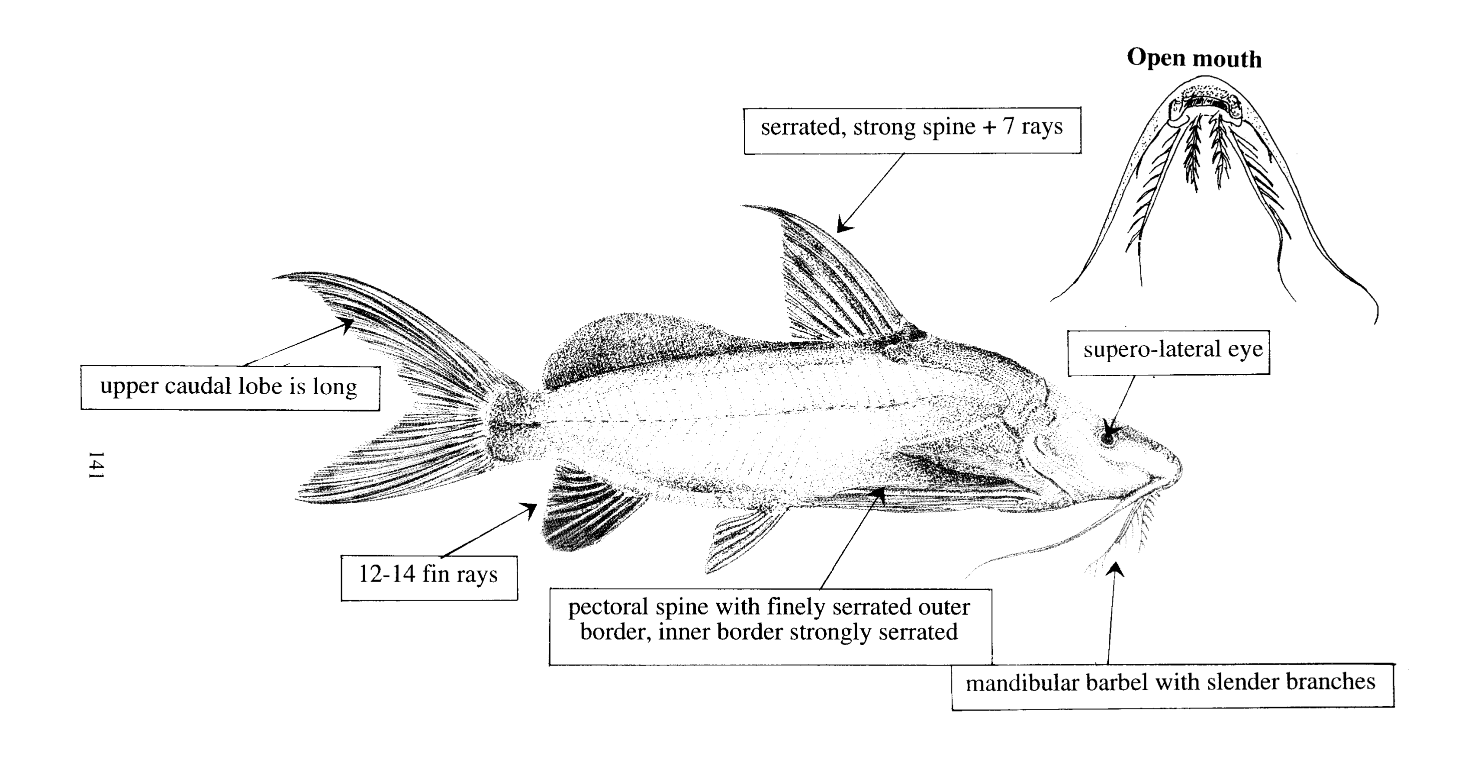
Status : Common.

Distribution :
Local : Whole Nile and Lake Nasser.
World : Blue and White Niles, Lake Chad, Senegal and Lake Albert.

Biology and Ecology :
-It lives on the bottom feeding on molluscs, crustaceans, annelid worms and to a lesser estent algae, fish scales, mud and sand. Active at night.
-Breeds in summer, from July to August.Length : to 40 cm.

Colour : cream or yellowish orange above, fainter below, adults are grey or olive green.

Economic Importance : well marketable, total production in 1996 about 1715 tons, i.e. contributes about 2.6 % of the total Nile catch in Egypt.



62- *Synodontis schall* (Bl. & Schn.) **قرقور شال - شيلان**

63.*Synodontis serratus* Rüppell, 1829.

Synonyms : *Pseudosynodontis serratus*, Bleeker, 1863.

Common Name :

English : Squeaker - Shield-head catfish
Arabic : شـــال - قرقـــور قواقيـــــــه
(Shaal - Gargour kawakiah)

Status : Rare.

Distribution :

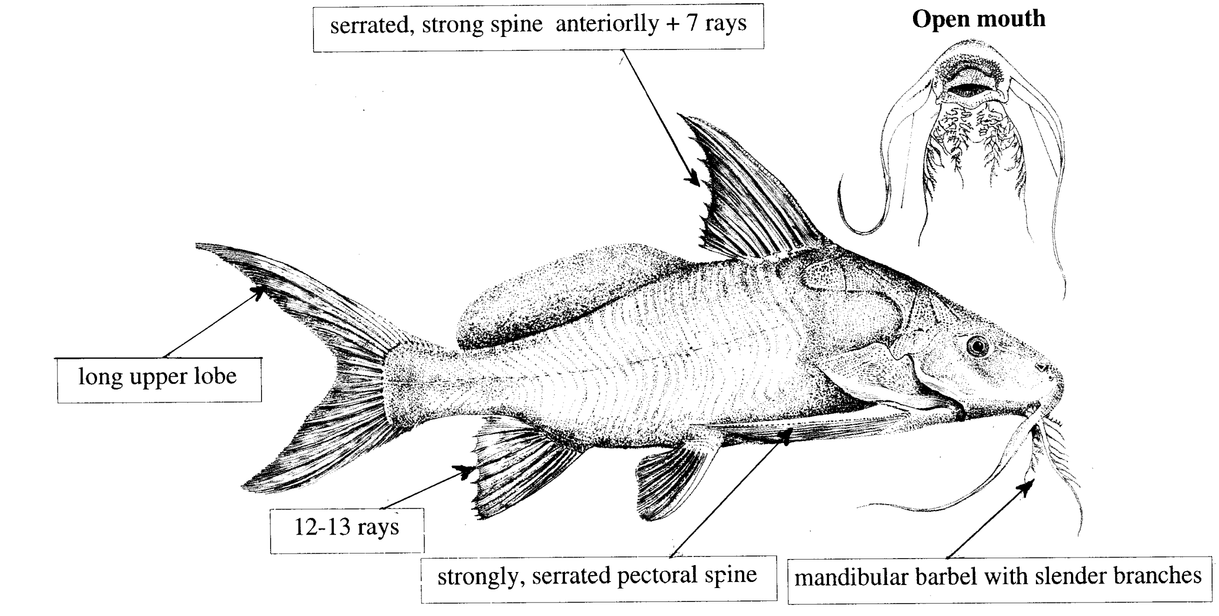
Local : Upper Nile (Beni Suef to Aswan) and Lake Nasser.
World : Blue and White Niles and Lake Chad.

Biology and Ecology :

- It prefers deep water and rocky habitats.
- This species reaches to 50 cm in length.

Colour : brownish above, whitish beneath, barbels pink.

Economic Importance : marketable when caught.



63- *Synodontis serratus* Rüpp. شال - قرقور قواقيه

64.*Synodontis clarias* (Linnaeus, 1758)

Synonyms : *Silurus clarias* Linnaeus, 1762,
Silurus callarias Bloch-Schneider, 1801,
Synodontis macrodon Geoffroy, 1827,
Synodontis clarias Rüppell, 1829.

Common Name :

English : Squeaker
Arabic : شيلان - قـــرقـــور قرموطى
(Shilane - Gargour Garmouti).

Status : Rare.

Distribution :

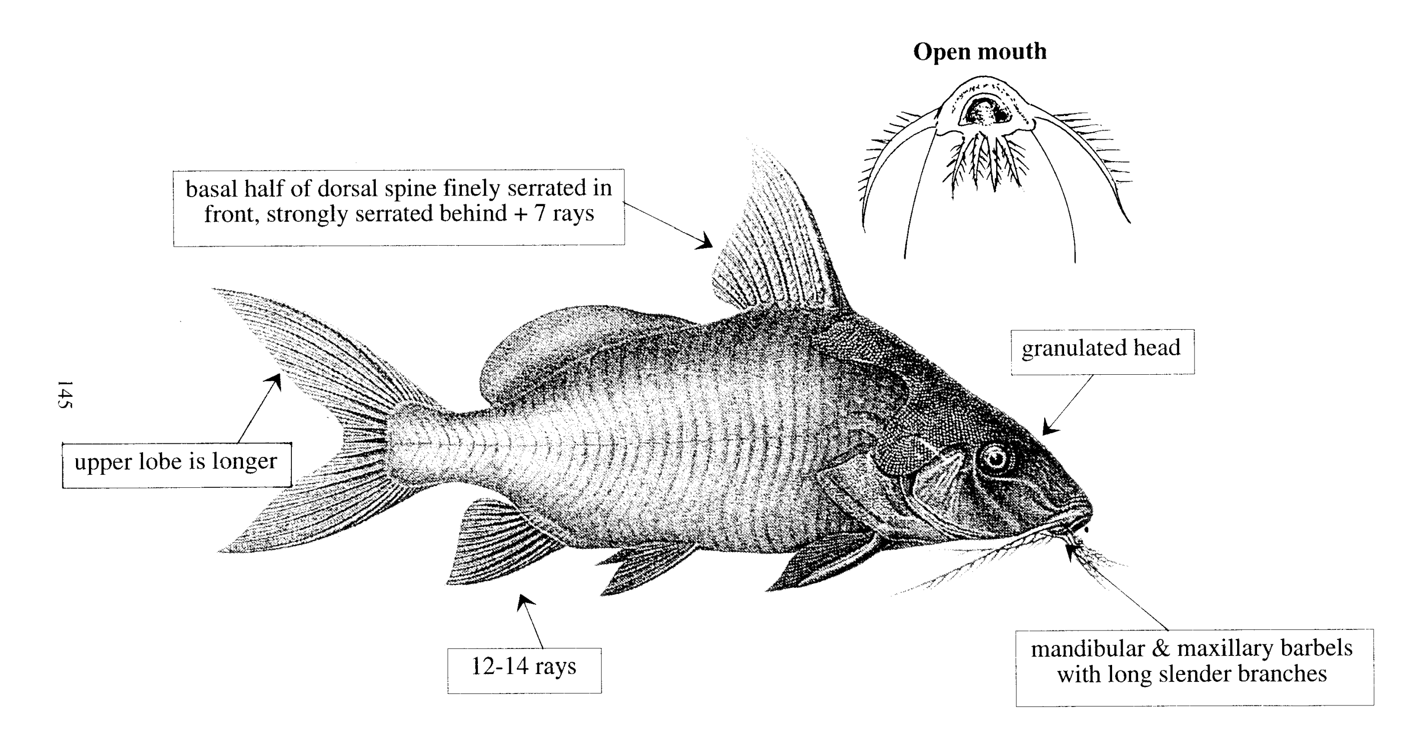
Local : Lower Nile and Lake Nasser.
World: White and Blue Niles where it is more common, Gambia, Lake Chad and Senegal.

Biology and Ecology :

-A bottom feeder; food contains chironomid larvae, plant remains and mud.
-Length : to 40 cm.

Colour : dark grey above, whitish beneath; fins greyish white; a pale red band along each lobe of caudal fin.

Economic Importance : marketable when caught.



64- *Synodontis clarias* (L.) شيلان - قرقور قرموطى

Genus : ***Brachysynodontis* Bleeker, 1863**

Dorsal fin with strong, straight, serrated spine and 7 rays. Head is granulated.

65. *Brachysynodontis batensoda* (Rüppell, 1832)

Synonyms : *Synodontis membranaceus* Geoffroy, 1827,
Synodontis batensoda Rüppell, 1832,
Synodontis melanogaster Ehrenberg, 1868,
Synodontis membranaceus Vaillant, 1896.

Common Name :

English : Squeaker

Arabic : قرقور جمل - شـــال بطن ســــوده

(Gargour Gamal - Shaal Batn Soda).

Status : Extinct, used to be caught in Cairo during flood-time (Boulenger, 1907).

Distribution :

Local : Extinct.

World : White and Blue Niles, Chad basin, Senegal, Gambia and Nigeria.

Biology and Ecology :

-This species swims upside down with its belly facing upwards,hence its black colour. Its specific name "batensoda" means in arabic black belly.

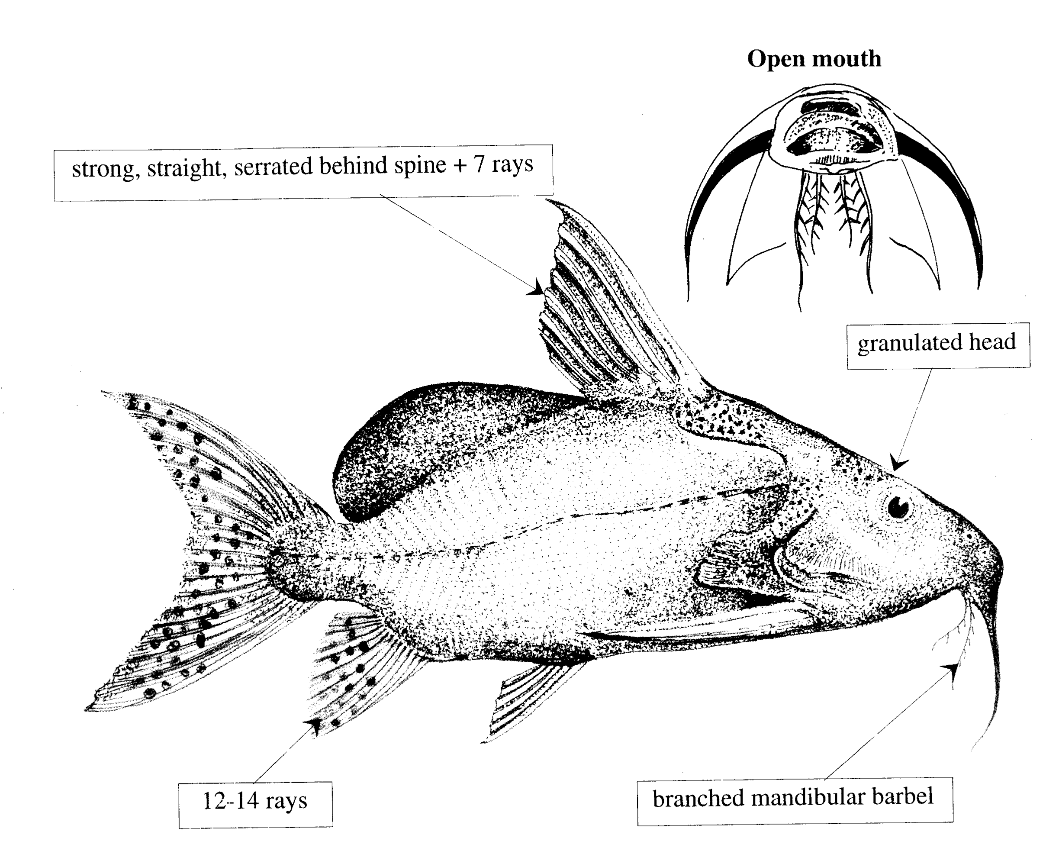
-A surface feeder, feeds on floating organisms; i.e. mosquitos, chironomid larvae and pupae, sometimes feeds on bottom organisms

-It is provided with a well developed sieving apparatus enabling it to feed on planktonic and floating organisms.

-Length : average 20 cm.

Colour : body silver greyish to dark pink, the belly dark brown to black. Fins grey. It can be distinguished from *H.membranaceus* by the round black spots on the ventral and caudal fins.

Economic Importance : not known.



65- *Brachysynodontis batensoda* (Rüpp.) قرقور - شال بطن سوده

Genus : ***Hemisynodontis***

66. *Hemisynodontis membranaceus* (Geoffroy, 1809)

Synonyms : *Pimelodus membranaceus*, Geoffroy, 1809,
Hemisynodontis membranaceus, Bleeker, 1863,
Synodontis membranaceus, Gunther, 1864,
Synodontis guentheri, Vaillant, 1892.

Common Name :

English : Squeaker

Arabic : قرقور غشائى (Gargour Khashaeieh).

Status : Extinct, used to be found in Upper Nile during flood (Boulenger, 1907).

Distribution :

Local : Extinct.

World : Nigeria, Senegal, White and Blue Niles, Lake Chad.

Biology and Ecology :

-It swims upside down; on its back.

-Feeding habits are the same as *B. batensoda*. Food consisting of plants, decomposed debris, crustaceans, insect larvae and vegetable material. Adapted to planktonic diet.

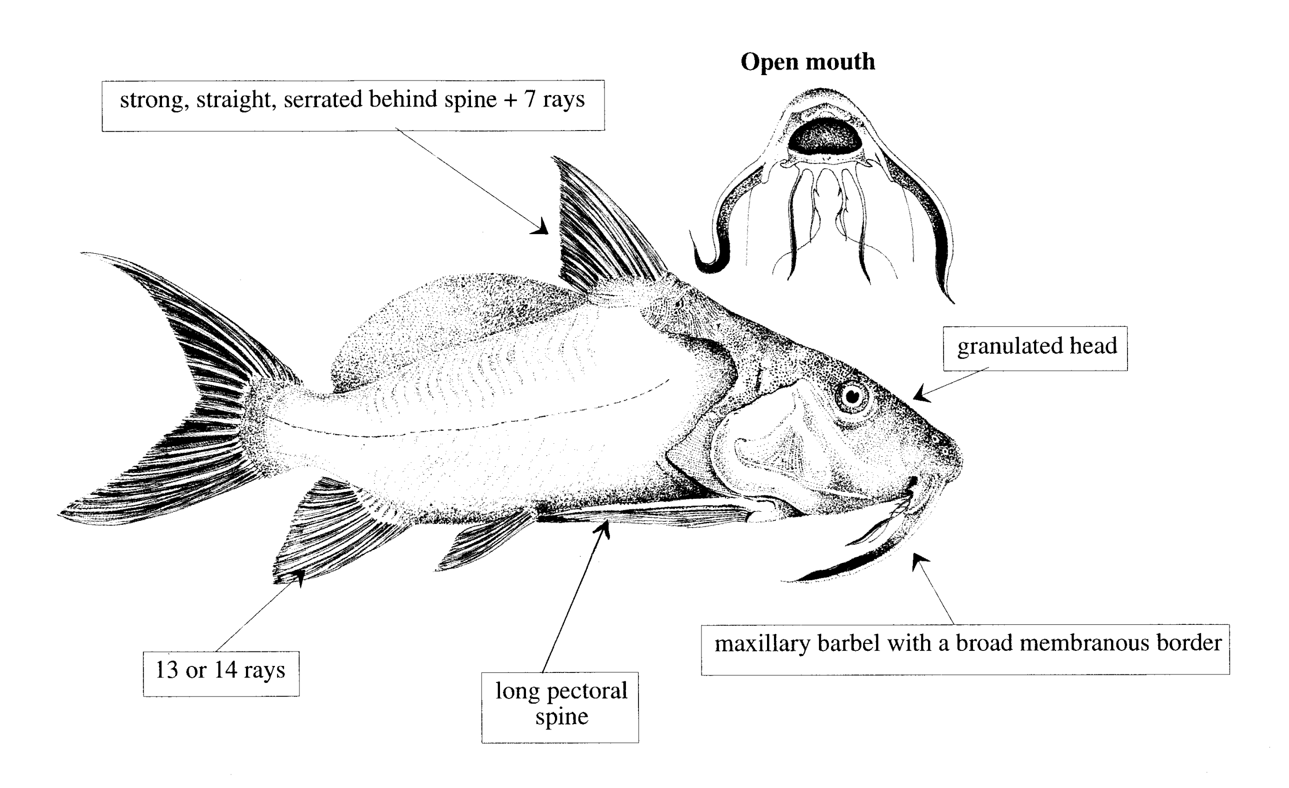
-Average length 45 cm.

-Body strongly compressed with granulated head.

-This species can be distinguished from *B. batensoda* by the presence of 6-9 minute mandibular teeth (30-57 in *H. batensoda*); mandibular barbles branched with a membraneous margin at the end.

Colour : silver greyish back, dark brown to black beneath, white barbles. No black spots on the ventral, anal and caudal fins.

Economic Importance : not known.



66- *Hemisynodontis membranaceus* (Geoffr.) قرقور غشائى

Genus : ***Mochocus* Joannis, 1835**

Short branched mandibular barbel. 3-4 bony scutes on each side of soft part.

67.*Mochocus niloticus* Joannis, 1835

Synonyms : *Rhinoglanis typus* Günther, 1869,
Rhinoglanis vannutellii Vinciguerra, 1898.

Common Name :
Arabic : مقوقس نيـــلى (Mekawkas Nili)

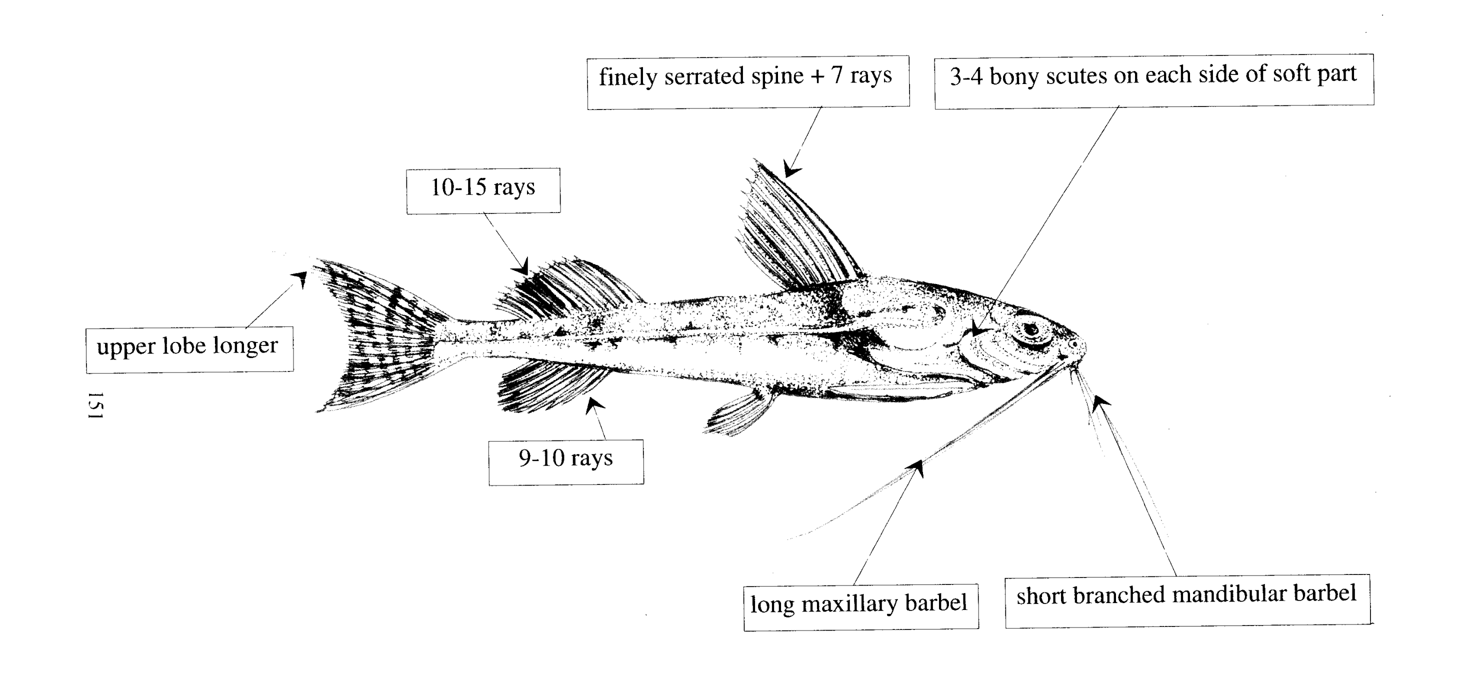
Status : Rare.

Distribution :
Local: Upper Nile (Beni Suef, Luxor, Aswan), very rare in Lake Nasser.
World : White Nile, Gondokoro, Lake Rudolf.

Biology and Ecology :
- Length : does not exceed 10 cm.

Colour : pale yellowish or greyish olive above, speckled with black colour dorsal and caudal fins yellowish; white belly.

Economic Importance : unmarketable.



67- *Mochocus niloticus* Joann. مقوقس نيلى

Genus : *Chiloglanis* Peters, 1868

Small catlets usually found in fast-flowing streams. The mouth forms a large disc and is used to hold onto rocks or plants in the water current. Short barbels. Eye with free border . The genus includes 34 species; one only in Egypt.

68. *Chiloglanis niloticus* Boulenger, 1900

Synonyms : none

Common Name :

English : Rock catlet - Suckermouth catlet
Arabic : كيــلو جلانس نيــــلى
(Kiloglanes Nili).

Status : Rare.

Distribution :

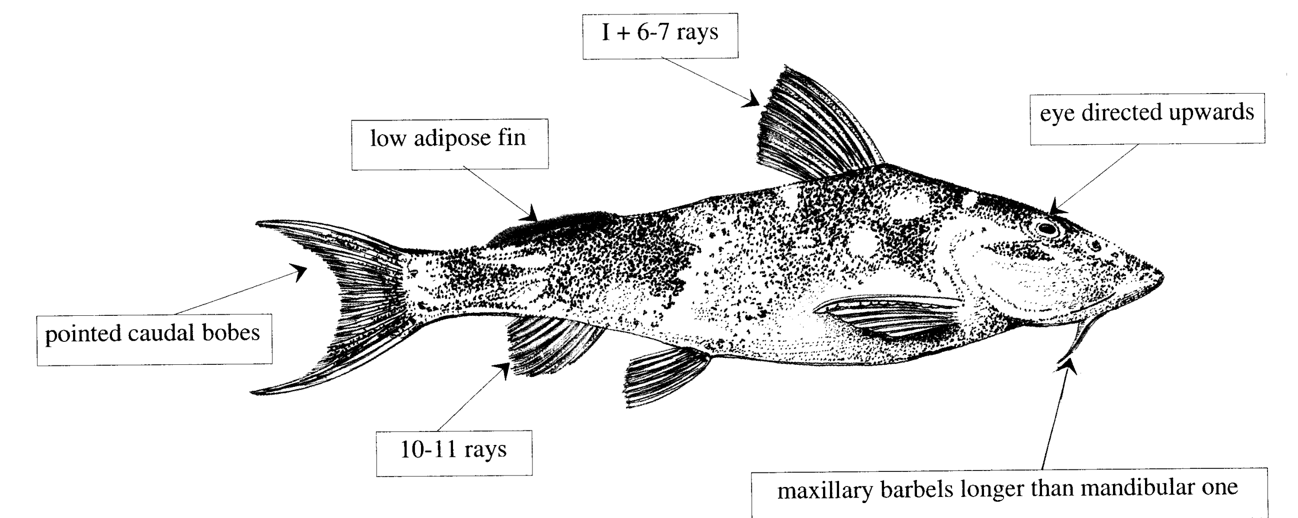
Local : Lake Nasser.
World : River Nile basin in Sudan.

Biology and Ecology :

-Small sized fish, found in shallow waters, occurring on rocky habitats.
-It feeds mainly on insects such as mayfly nymphs.
-Body slightly compressed with short broadly rounded snout.

Colour : body pale greyish olive above with broad dark olive or blackish cross bands, white beneath, rayed fins greyish, each caudal lobe with a blackish bar with a pale yellowish edge.

Economic Importance : unmarketable.



68- ***Chiloglanis niloticus*** **(Blgr.) كيلوجلانس نيلى**

Order CYPRINODONIFORMES (MICROCYPRINI) CYPRINODONTIFORM FISHES

Pelvic fin abdominal. A single dorsal fin. Mouth opens upwards. Teeth small or absent. Caudal fin rounded.

FAMILY : CYPRINODONTIDAE.

Killifishes

It includes about nine genera in Africa; two in Egypt. Small fishes, named for their habit of living in shallow weedy habitats.

Genus : ***Aphanius* Nardo, 1827**

69.*Aphanius fasciatus* (Valenciennes, 1821)

Synonyms : *Lebias fasciatus* Valenciennes, 1821,
Aphanius nanus Nardo, 1827,
Poecilia calaritana Bonelli, 1829,
Lebias calaritana Costa, 1839,
Cyprinodon calaritanus Cuvier & Valenciennes, 1846,
Cyprinodon fasciatus Cuvier & Valenciennes, 1858,
Cyprinodon dispar Günther, 1859,
Cyprinodon cyanogaster Guichenot, 1859.

Common Name : English : Topminnow - Pastrica
Arabic : بطريق (Batreek).

Status : Rare.

Distribution :

Local : Delta and coastal lagoons.

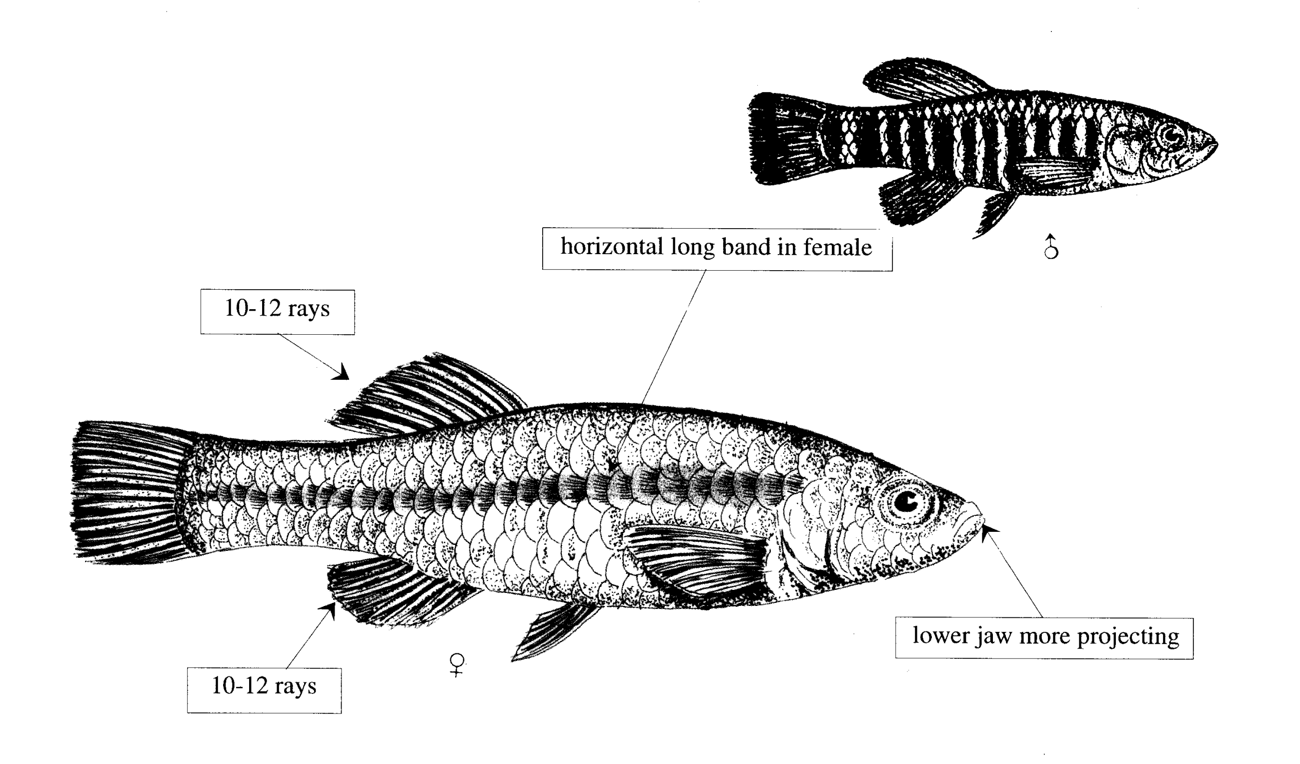
World: Mediterranean basin; Italy, Algeria, Cyprus, Malta, Dalmatia, Greece Marmara Sea, Syria, Israel, North Africa from Egypt to eastern Algeria.

Biology and Ecology :

- Inhabits inshore well-vegetated habitats, often in shallow water.
- Prefers standing or gently flowing water. Survives for 3-4 years.
- Food : mainly small invertebrates.Reproduction : March-June.
- Length : to 7.2 cm (females), 6 cm (males).

Colour : dark olive on back, white belly. Fins are white in females and yellow in males. Horizontal and lateral black bands at the two sides of male, while in females10-15 vertical bands on the two sides.

Economic Importance : unmarketable, but used for mosquito larval control.



69- *Aphanius fasciatus* (Val.) بطريق

Genus : *Aplocheilichthys* Bleeker 1863

Body relatively slender. Origin of the dorsal fin behind the first anal ray. Dorsal surface of the head flattened. Teeth in several rows, those of the outermost row somewhat enlarged. Mouth above head or middle of body. Dorsal fin much shorter than anal fin with less than 12 rays.

70. *Aplocheilichthys schoelleri* (Boulenger, 1901)

Synonyms : *Haplochilus schoelleri* Boulenger, 1904.

Common Name :

Arabic : بطحيـــش شولورى **(Bathish schoelleri).**

Status : Extinct, used to be found in freshwater regions of Lakes Mariut and Manzala (Boulenger, 1907).

Distribution :

Local : Extinct.

World : Africa, White Nile, Asia, China, Japan, Central and South America.

Biology and Ecology :

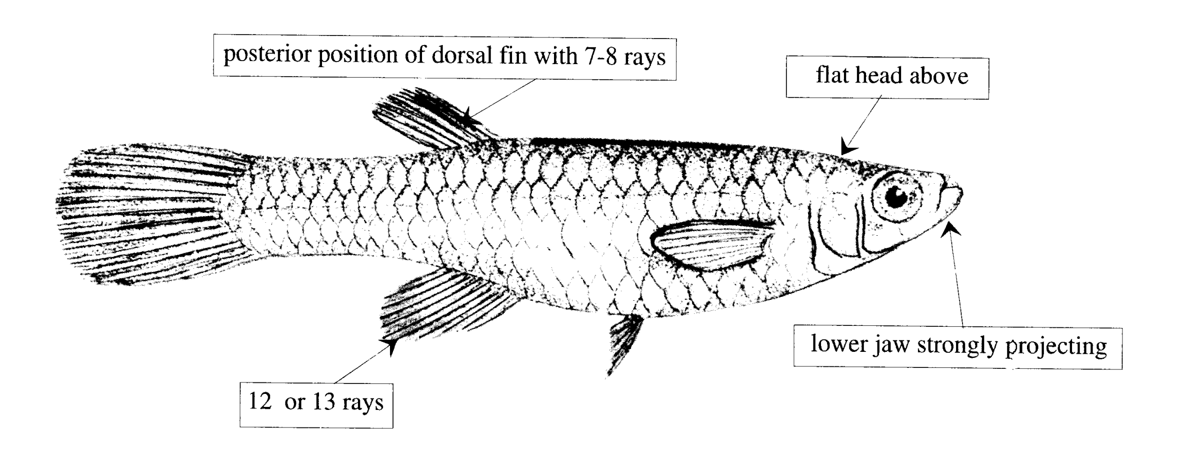
-It is oviparous and hangs its eggs in bunches to the twigs of plants by means of little threads.

-It keeps mostly to the surface of water.

-It does not exceed a length of 3.3 cm.

Colour : dark blue, white belly, yellow fins.

Economic Importance: unmarketable, but sometimes used for mosquito larval control.



70- *Aplocheilichthys schoelleri* (Blgr.) بطحيش شولر

Order PERCIFORMES
Perciform Fishes
Pelvic fins when present, thoracic or jugular, with 1 spine and 5 soft rays.

FAMILY : CENTROPOMIDAE

Snooks
Small teeth. One or more spines at rear angles of preopercle and opercle. Lateral line is continued across caudal fin or forked into 3 branches at its base. One genus and species in Egypt.

Genus : ***Lates* Cuvier, 1828.**

71.*Lates* (*Lates*) *niloticus* (Linnaeus, 1758)

Synonyms : *Perca nilotica* Linnaeus, 1762,
Centropomus niloticus Lacépède, 1802,
Perca latus Geoffroy 1827.

Common Name :
English : Nile perch.
Arabic : قشـــر بيـــاض – ســـاموس (Keshr Baiad - Samoos)

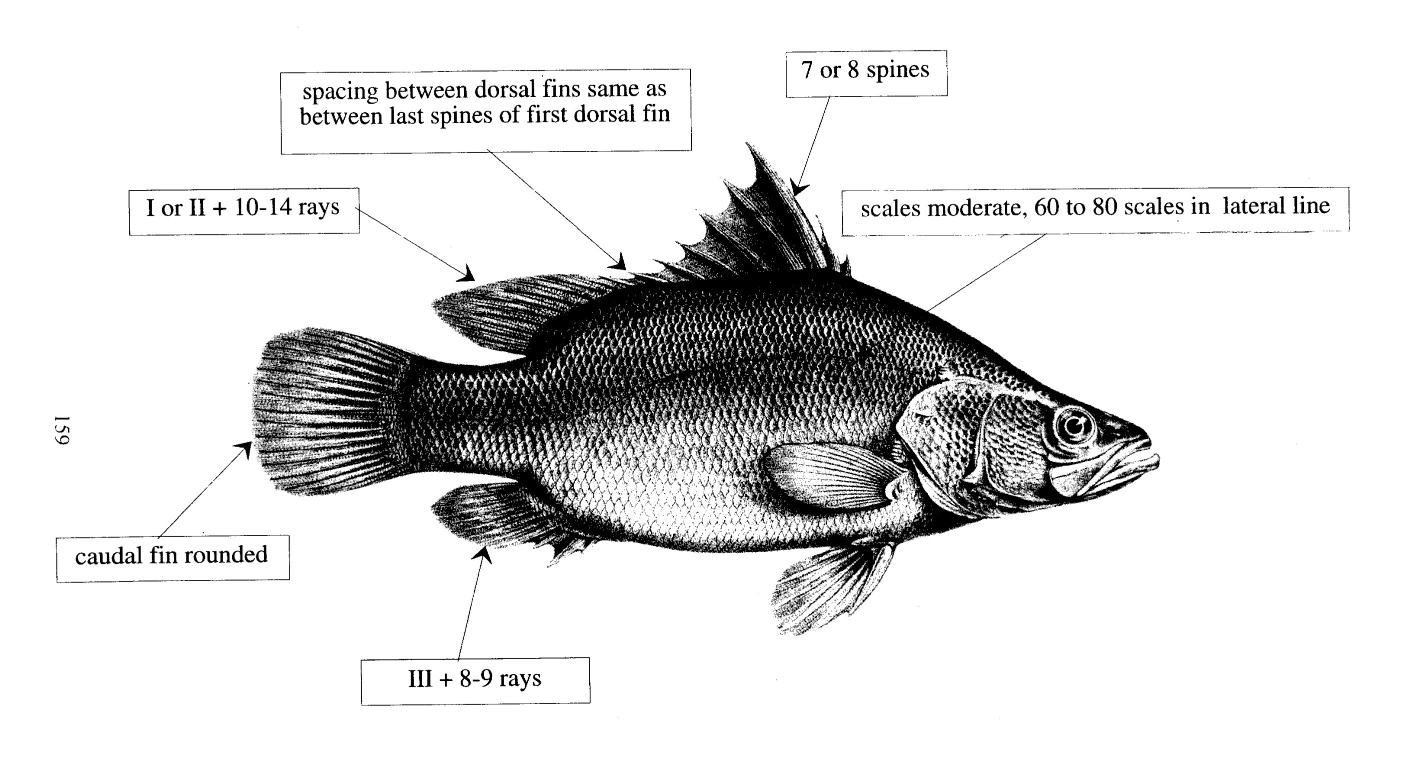
Status : Common.

Distribution :
Local : Delta, Lower and Upper Nile, Lake Wadi El-Rayan and Lake Nasser.
World: Lake Nubia, Blue Nile, Senegal, White Nile, Congo, Chad, Niger, introduced into Lake Victoria.

Biology and Ecology :
- Fierce, fighter fish, piscivorous feeds mainly on *Tilapia* sp. *Alestes* sp. etc. and shrimps.
- Long spawning season; February-August. Spawns in nests scooped in gravel.
- Length to 2 m.

Colour : uniform brown or olive above in the adults, silvery beneath.

Economic Importance : well marketable. Its total production in the River Nile in 1996 was about 795 tons, i.e. it contributes about 1.3 % of the total Nile catch. Its production in Lake Nasser was 904 tons, and in Wadi El-Rayan was 44 tons in the same year.



71- *Lates (Lates) niloticus* (L.) قشر بياض - ساموس

FAMILY : CICHLIDAE

Chichlids

Scales on the head and body, the dorsal and anal fins composed of spinous and soft-rayed sections. Lateral line is divided into upper and lower sections. A single nostril opening on either side of the snout. It includes about 870 species described; 6 species in Egypt.

Genus : *Hemichromis* Peters, 1857

A distinct African lineage of bright coloured, bold predators. They are substrate spawning brood guarders.

72. *Hemichromis bimaculatus* Gill, 1862

Synonyms : *Hemichromis letourneuxii*, Sauvage, 1880,
Hemichromis rolandi, Sauvage, 1881,
Hemichromis saharae, Sauvage, 1904.

Common Name :

English : Jewelfish

Arabic : هيمكـروميس مخـطط (Hemichromis makhatat)

Status : Very rare, used to be caught from the coastal lagoons, especially Lake Mariut (Boulenger, 1907).

Distribution :

Local : Coastal lagoons.

World: Sierra Leone, Niger, Congo, Cameroon, White Nile, Nubia Lake, Gambia, Senegal, Algeria.

Biology and Ecology :

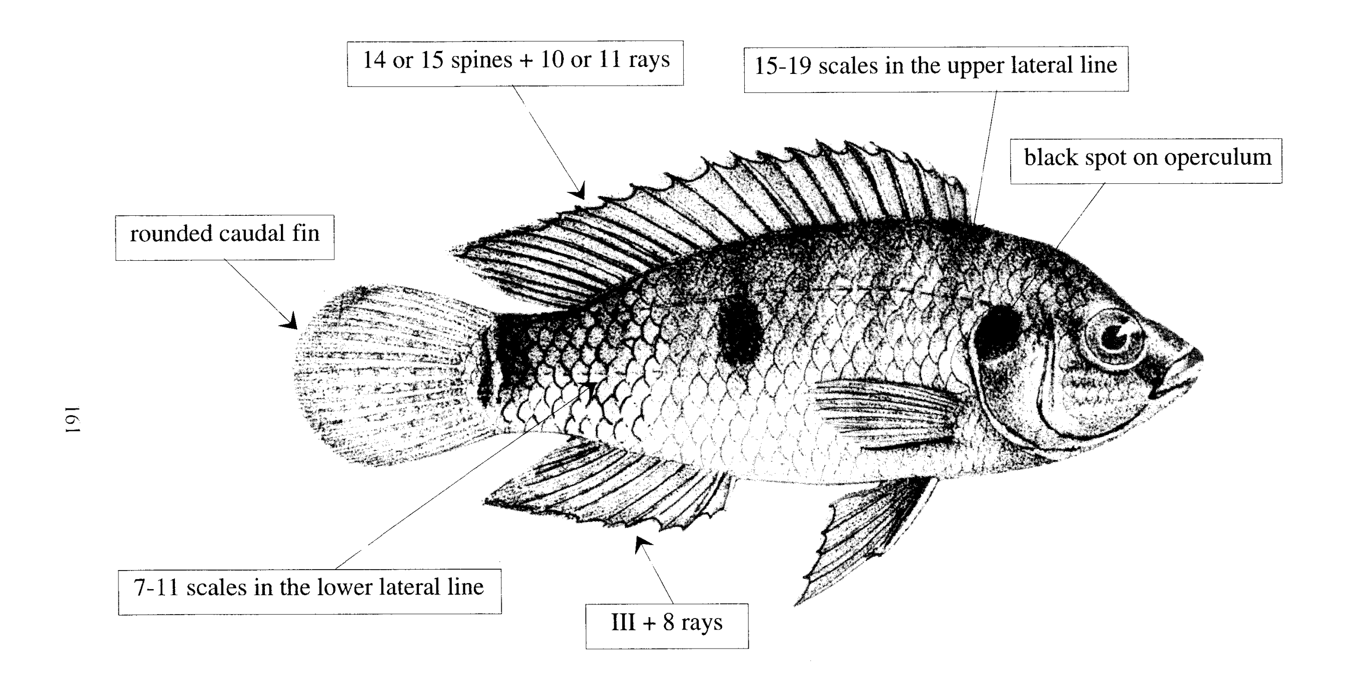
-Carnivorous; very aggressive towards cichlids (Boulenger, 1907).

-Prefers sheltered water.

-Length : 9-15 cm.

Colour : yellowish brown, with a black spot on the gill-cover, another one on the middle of the side of the body, and often a third at the base of the caudal fin. Ill-defined dark cross-bands may be present on the body.

Economic Importance : occassional aquarium fish.



72- *Hemichromis bimaculatus* Gill. هیمکرومس مخطط

Genus : ***Haplochromis* Hilgendorf 1888**

Snout with straight or slightly convex profile. Gill-rakers are very short, 7-9 on lower part of anterior arch.

73.*Haplochromis bloyeti* (Sauvage, 1883)

Synonyms : *Haplochromis strigigena* Pfeffer, 1893,
Ctenochromis strigigena Pfeffer, 1893,
Chromis multicolor Schoeller, 1903,
Paratilapia multicolor Hilgendorf, 1903.

Common Name :

English : Lesser perch

Arabic : هابلوكـروميس قـــزم (Haplochromis Kezm)

Status : Rare.

Distribution :

Local : Delta and Coastal Lakes, especially Lake Mariut.

World : White Nile, Uganda and East Africa.

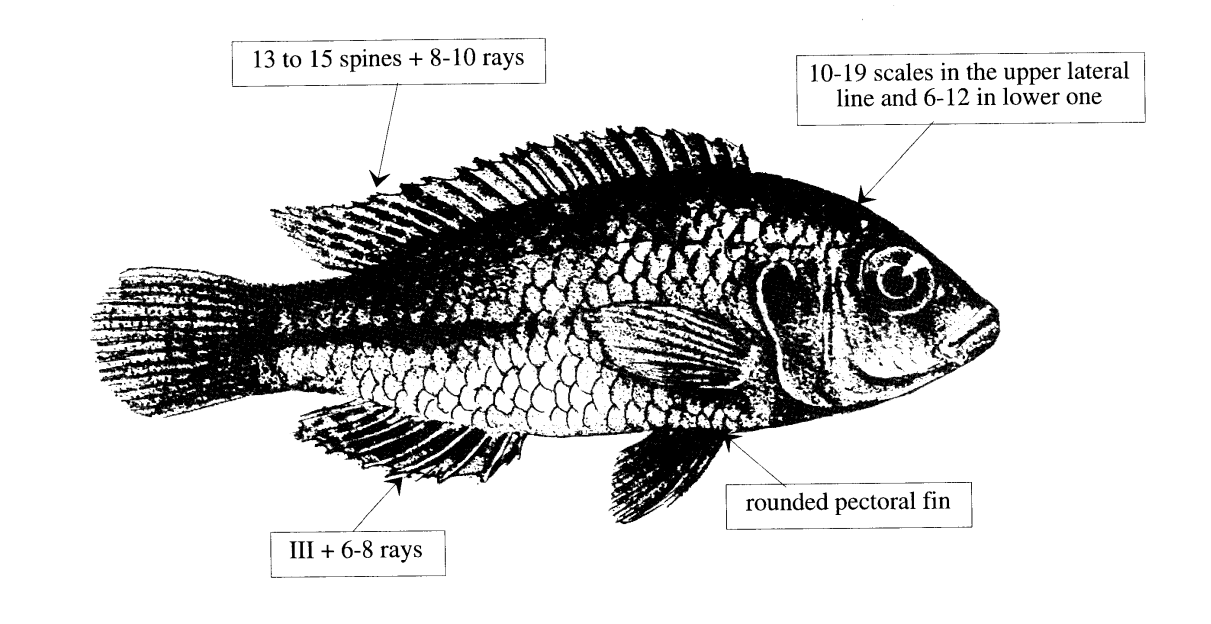
Biology and Ecology :

-It prefers sandy and stony bottom and water weeds.
-Adults carry eggs or young in their mouth and pharynx.
-Length : does not exceed 7 cm (Like *Tilapia zillii* youngs)

Colour : greyish or olive, with or without, more or less, regular dark vertical bars; a dark bar often extends from below the anterior third of the eye to the mouth; a black spot on the operculum and another at the root of caudal fin; males sometimes with dark bars across the caudal fin.

Economic Importance : unmarketable, sometimes used as aquarium fish.

During our survey in June 1997 a specimen of *Paratilapia*, possibly *P. prognatha*, was collected form El-Pharonieh Canal, Monoefieh Governorate, being the first record of this species in Egypt. Further investigation are being carried out. It is worth to mention that Boulenger (1907) reported that it is endemic to Lake Victoria. (Plate 10)



73- *Haplochromis bloyeti* (Sauv.) هابلوکرومس قزم

Genus : *Tilapia* A. Smith, 1840

It is restricted, now, to the substrate spawning species. 8-12 gill-rakers. Caudal fin is rouded or truncate. Dark spot at the base of soft dorsal fin in aduts and juveniles. One species only in Egypt.

74.*Tilapia zillii* (Gervais, 1848)

Synonyms : *Acerina zillii* Gervais, 1848,
Coptodon zillii Gervais, 1853,
Glyphisodon zillii. Valenciennes, 1858,
Haligenes trisstrami Gunther, 1859,
Chromis tristrami Gunther, 1862,
Chromis andrece Gunther, 1864,
Chromis niloticus Gervais, 1869,
Chromis mossambicus Seteindachner, 1870,
Chromis zillii Sauvage, 1877,
Tilapia menzalensis Boulenger, 1899.

Common Name :

English : Tilapia

Arabic : بلطى أخضر - شباره أخضر

(Bolti Akhadar - Shobara Akhadar).

Status : Common.

Distribution :

Local : Coastal Lagoons and Lake Qarun and along the River Nile.

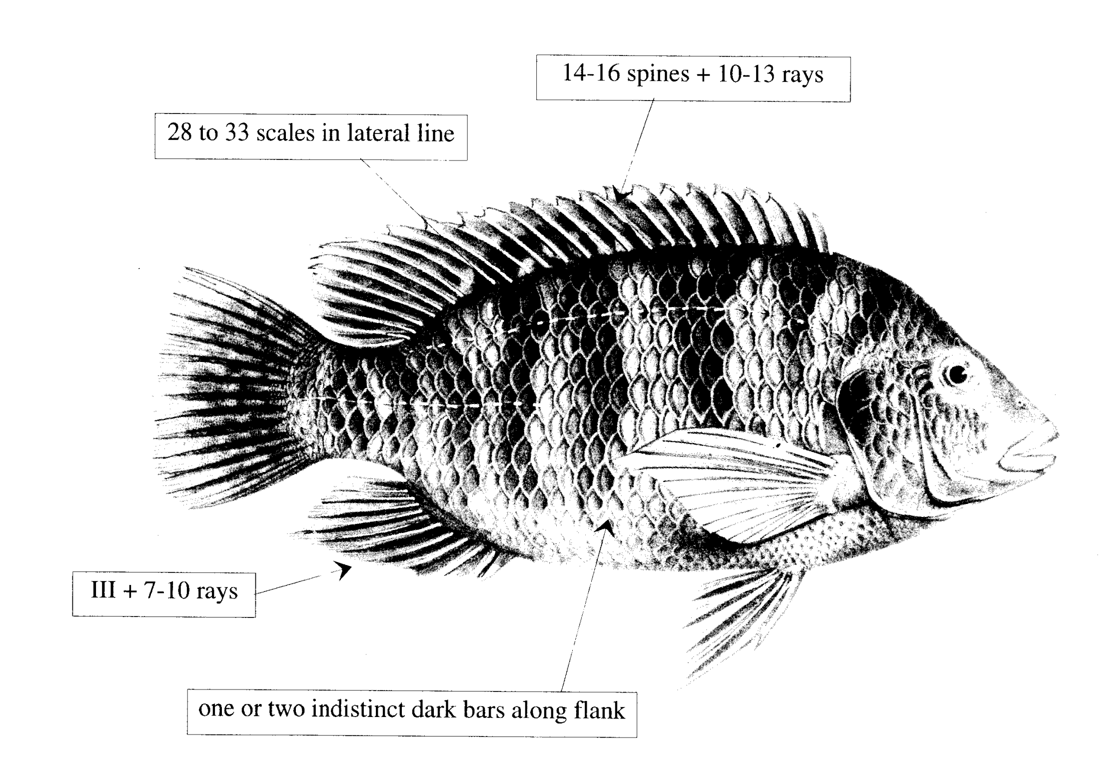
World : Africa, north of the Equator (River Nile system and Western Africa up to Morocco). Middle East (Jordan Valley, Syria) Recently, it was introduced to East Africa, U.S.A (California, Florida, Hawaii), Southern Russia, Japan, Malaysia and Philippines.

Biology and Ecology :

-A diurnal fish preferring shallow areas with vegetations, feeding on aquatic weeds and epiphytic diatoms.
-It is the most salt tolerant of all tilapia species, tolerating salinities as high as 40 ‰ NaCl.
-Spawning season extends from May to August.It builds nests for egg incubation, i.e. not a mouth breeder.
-Not found in areas with a water temperatures below 13 ^{o}C.
-Maximum length 29 cm.

Colour : olive or brown with 6-8 dark cross bars, a black spot on gill cover.

Economic Importance : well marketable.



74- *Tilapia zillii* (Gerv.) بلطى أخضر

Genus : ***Oreochromis* Trewavas, 1983**

They are relatively large, deep-bodied; maternal mouth brooding cichlids. 14-28 gill rakers. Fine teeth in several rows on the jaws and fine pharyngeal teeth. The genus includes 33 species, only 2 in Egypt.

75. *Oreochromis niloticus niloticus* (Linnaeus, 1757)

Synonyms : *Labrus niloticus* Linnaeus, 1757,
Chromis nilotica Cuvier, 1844,
Chromis fuentheri Steindachber, 1864,
Chromis spilurus Günther, 1894,
Tilapia nilotica Boulenger, 1898.

Common Name :

English : Nile Tilapia

Arabic: بلطي أبيض - بلطي سلطاني - بلطي نيلي
(Bolti Abiad-Bolti Saltani - Bolti Nili)

Status : Common.

Distribution :

Local: River Nile and its tributaries, coastal Lakes and Lake Nasser.

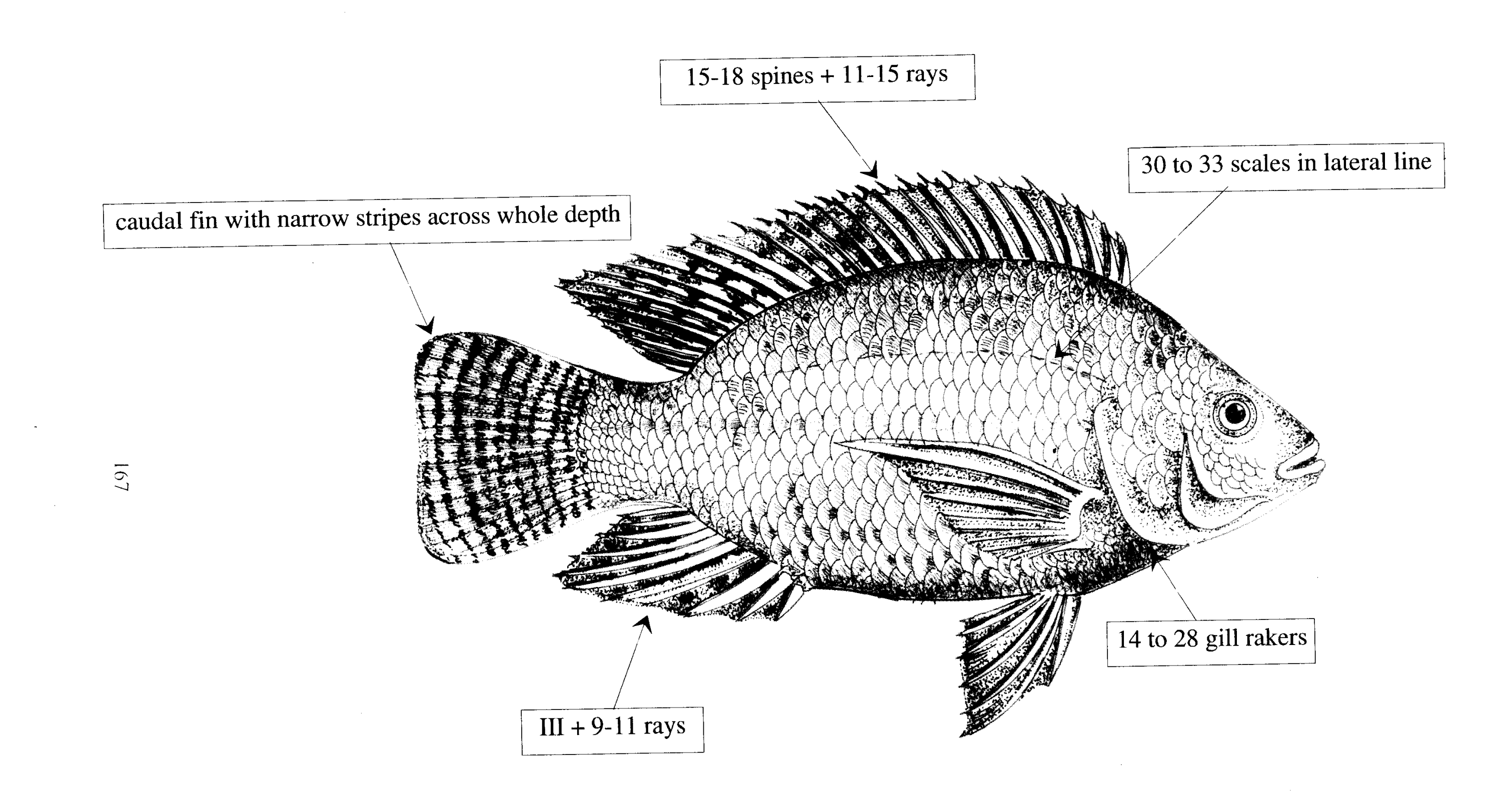
World: East Africa (Nile River system) Congo and West Africa (Senegal and Niger). Introduced to Isreal, South East Asia (Indonesia, Philippines, Taiwan, Thailand), U.S.A. (Florida), Latin America (Barzil, Mexico, Panama).

Biology and Ecology :

-Mostly in inshore waters but extends down to at least 15 meters.
-Food : periphytes, algae, weeds and epiphytic diatoms growing on plants.
-Spawning nests are prepared in shallow waters.
-Spawning season extends from April to September.
-Mouth-breeder where females incubate eggs in their buccal cavity.
-Length : to 60 cm.

Colour : greenish-olive, shining silvery. Dorsal, anal and caudal fins may be edged with bright red. A dark spot on the operculum.

Economic Importance : well marketable. The most economic fish in Egypt. Its production in the River Nile in 1996 was about 25,504 tons, i.e. it contributes about 40 % of the total Nile catch. In Lake Nasser, its production is about 20%; in Lake Manzala about 63 % (33,000 tons); in Lake Mariut is 65 % (2,603 tons), in Lake Wadi El-Rayan 47 % (330 tons). It contributes about 32% of the total country catch (GAFRD, 1996).



75- *Oreochromis niloticus niloticus* (L.) **بلطى أبيض - بلطى سلطانى - بلطى نيلى**

76.*Oreochromis aureus* (Steindachner, 1864)

Synonyms : *Chromis aureas* Steindachner, 1864,
Tilapia affinis Boulenger, 1899,
Tilapia monodi Daget, 1954,
Tilapia lemassoni Blache & Miton, 1960,
Tilapia aurea Trewavas, 1965.

Common Name :
English : Kurpertilapia
Arabic : بلــطى أزرق - أبيــض حسانى
(Bolti Azrak - Abiad Hasani).

Status : Common.

Distribution :
Local: Coastal lagoons, the Delta, Ismailia Canal, confined to the Nile Delta.
World: West Africa (Senegal and Niger River systems), Nile River system, Middle East (Jordan Valley, Syria)

Biology and Ecology :
-Spawning season: March-August.
-Spawning in shallow waters around the lakes.They are mouth brooders where females incubate eggs in their buccal cavity.
-It can tolerate salinities up to about 20 ‰ .
-Length : to 30 cm
-Able to survive 10 °C.
-It is distinguished from *O. niloticus* by the lower dorsal spine count and that the lappets of the dorsal fin are always dark, never red or paale.
-Hybridization between *O. niloticus* and *O. aureus* can results in high ratio of male offspring which may reach 100 % males.

Colour : shining silvery and caudal fin with pinkish red extremities. Breeding males with bright blue head and blue-black chin and throat.

Economic Importance : well marketable.

bright red
15-16 dorsal spines
profile of head straight
pale bands
30 to 33 scales in lateral line

76- *Oreochromis aureus* (Steind.) بلطى أزرق - بلطى حسانى

Genus : ***Sarotherodon* Artedi, 1757.**

Males and females are mouth-brooders. Snout with straight or convex profile, broader than long. Small mouth with thick lips, extending to below the nostril.

77.*Sarotherodon galilaeus galilaeus* (Artedi, 1757)

Synonyms : *Sparus galilaeus* Artedi, 1757,
Tilapia pleuromelas Dumeril, 1859,
Chromis galilaeus Günther, 1862,
Chromis tiberiaadis Lorter, 1883,
Chromis microstomus Lortet, 1883,
Tilapia galilaea Boulenger, 1899.

Common Name :
English : Tilapia
Arabic: بلـطى مولاى - بلـطى جليـلى
(Bolti Molley - Bolti Galilae).

Status : Common.

Distribution :

Local : Along River Nile, Coastal Lakes and Lake Nasser, where it is the predominant species..

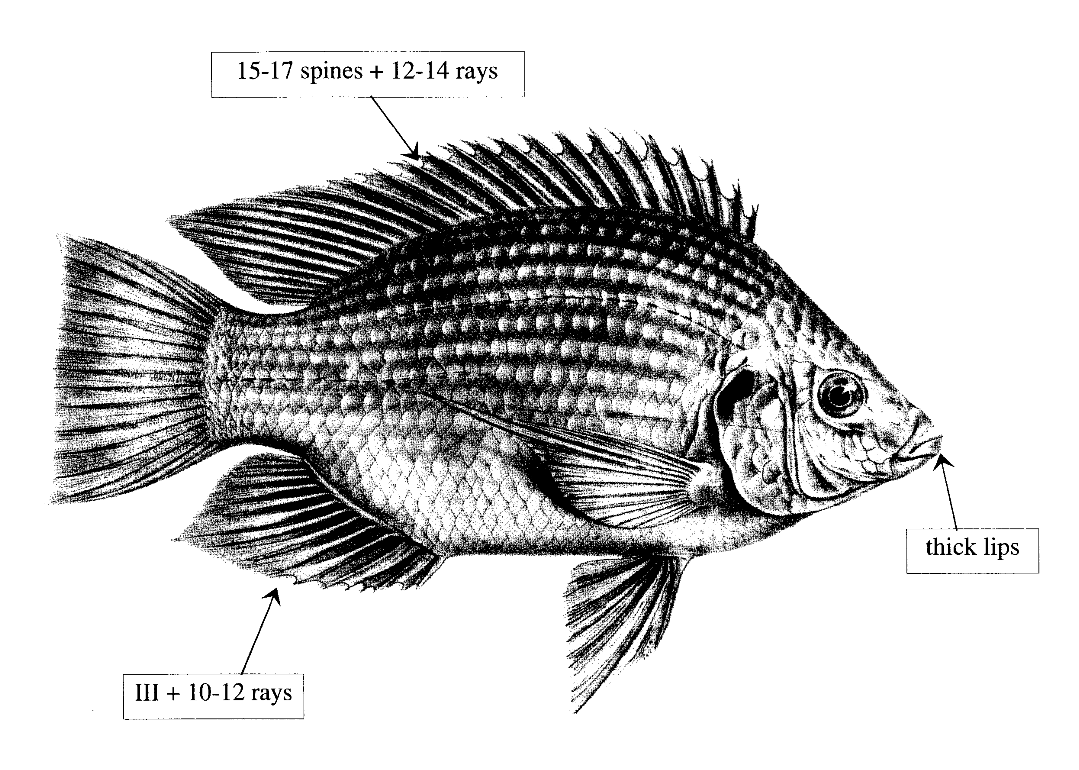
World: Lake Galilee, Jordan, Niger, Senegal, Blue Nile, Gambia, Volta; Lake Albert, Lake Chad .

Biology and Ecology :

-It occurs in shallow inshore waters of lakes.
-Food predominantly phytoplankton, planktonic crustaceans are also eaten.
-Mouth-breeder fish, where males keep their brood in the mouth.
-Spawning takes place in shallow, quiet waters.
-Spawning apparently proceeds along most months of the year.
-Able to survive at 10 °C.
-Length : to 40 cm.

Colour: generally dark olive uniform or with dark spots. Sides of abdomen silverish, abdomen whitish, distinct opercular spot.

Economic Importance: well marketable. Most of *Tilapia* (i.e. 80-90%) catch from Lake Nasser is composed of this species; about 15,000 tons in 1996.



77- *Sarotherodon galilaeus* (Art.) بلطى جليلى - بلطى مـــــولاى

FAMILY : MORONIDAE*

Temperate basses
Rather elongate fish, deep caudal peduncle. Opercle with 2 flat spines. Two separate dorsal fins, the first with 8-10 spines, the second with one spine and 11-14 rays. Anal fin with 3 spines.

Genus : ***Dicentrarchus* Valenciennes 1829**

78. *Dicentrarchus labrax* (Linnaeus, 1758)

Synonyms : *Morone labrax* Linnaeus, 1766,
Perca labrax Linnaeus, 1766,
Perca punctata Gmelin, 1789,
Scioena labrax Bloch, 1792,
Perca diacantha Bloch-Schneider, 1801,
Centropomus lupus Lacepede, 1802,
Perca elongata Geoffroy, 1809,
Labrax lupus Cuvier & Valenciennes, 1828,
Labrax vulgaris Guerin, 1829,
Dicentrarchus elongatus Gill, 1860.

Common Name :
English : Sea bass.
Arabic : قــــاروص (Karouse).

Status: Rare in freshwater bodies, but common in marine ones [Although it is a marine species, it occasionally migrates up the lower Nile. Some specimens were caught at the Barrage, before High Dam Construction (Boulenger, 1907)].

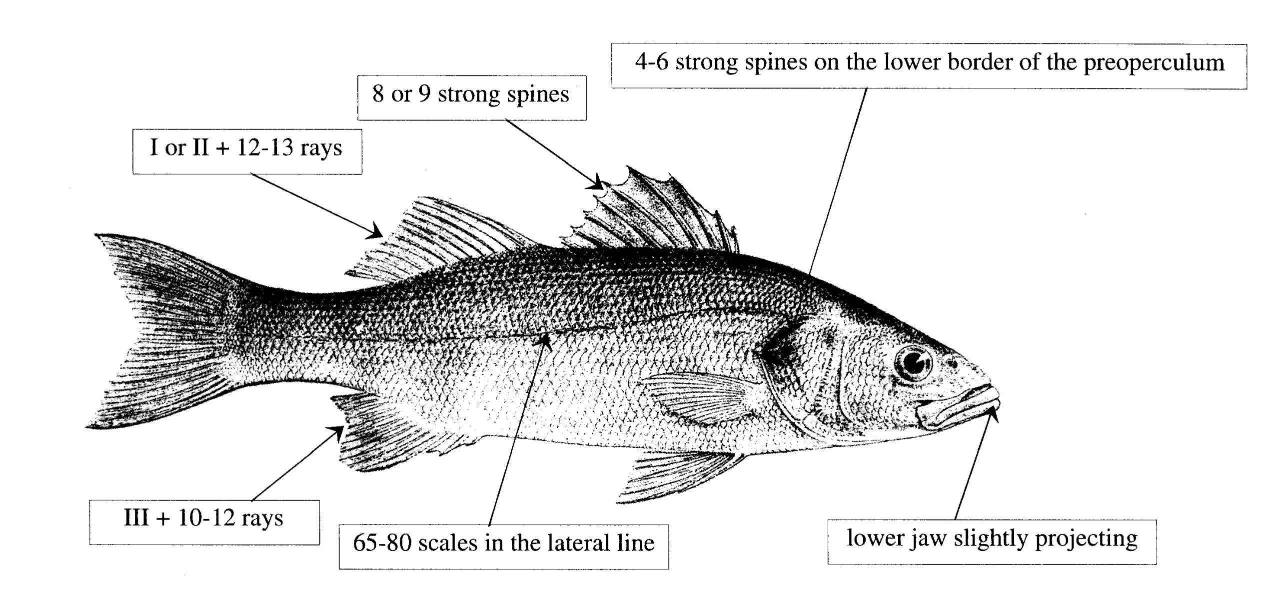
Distribution :
Local: Coastal lagoons, mouths of the River Nile Delta and Suez Canal.
World: Mediterranean and European coasts, Black Sea and North Atlantic, from Norway southwards to Morocco and the Canaries.

Biology and Ecology :
-Littoral, various kinds of bottoms, brackish water and occasionally rivers.
-Food: shrimps, molluscs and fishes.
-Reproduction : January-March in Mediterranean.
-Length to about 1 m.

Colour : silvery greenish or bluish on back. Young with some dark spots on upper part of body but adults never spotted. A diffuse black spot on the edge of opercule.

Economic Importance : high-valued fish.

* Formerly included in Serranidae and in Percichtheyidae (Tortonese, 1986).



78- *Dicentrarchus labrax* (L.) قـاروص

79.*Dicentrarchus punctatus* (Bloch, 1792)

Synonyms : *Morone punctata* Bloch, 1792,
Perca punctata Geoffroy, 1827,
Labrax punctatus Gunther, 1863,
Labrax schoenleinii Peters, 1865,
Dicentrarchus orientalis J. & E., 1890.

Common Name :

English : Spotted Seabass.

Arabic : قاروص منقط (Karouse Menakatt).

Status : Rare, although a marine species, some specimens have been caught from freshwater in Damietta.

Distribution :

Local : Coastal Lakes, mouth of Damietta branch and Suez Canal.

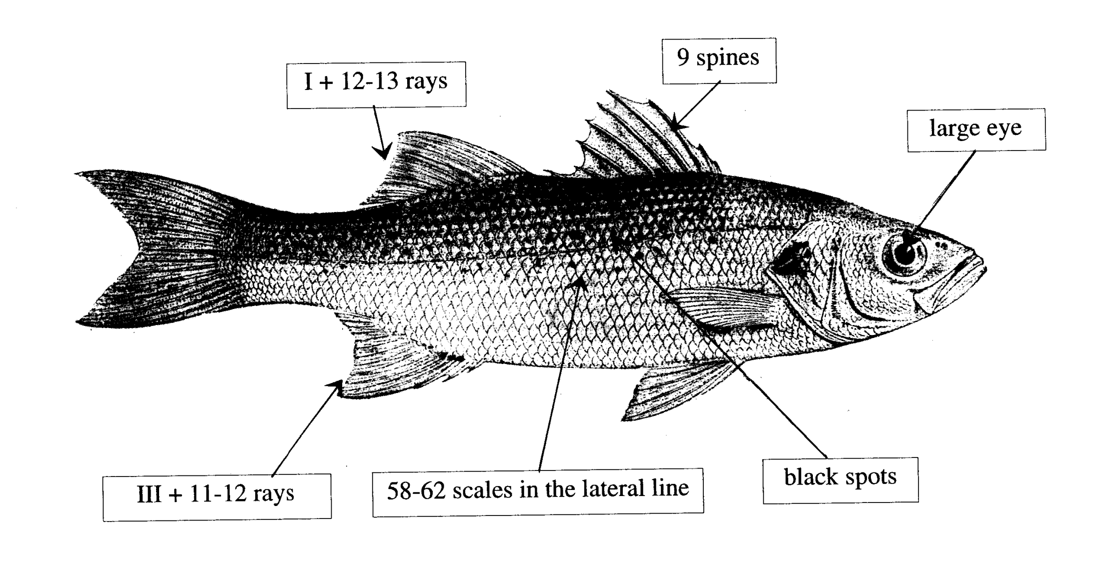
World: Mediterranean and Atlantic coasts, coasts of Europe, Morocco and Senegal., recorded from Gulf of Suez.

Biology and Ecology :

-Various kinds of bottoms, brackish water and occasionally in rivers.
- Food : Fish, molluscs and shrimps.
- Reproduction : January-March.
- Length to 70 cm.

Colour : silvery, bluish or greenish on back; adults with small black spots scattered on back and sides. A conspicous black spot on opercule.

Economic Importance : high-valued fish.



79- *Dicentrarchus punctatus* (Bloch.) قـاروص منقـط

FAMILY : MUGILIDAE

Mullets

An ecoomically important family of coastal, estuarine and freshwater fishes. Recognised by their spear-shaped body, with widely separated dorsal fins (the first with four sharp spines), depressed head. There is no lateral line on the body.

Genus : ***Mugil*** **Linnaeus, 1758**

Well-developed adipose eyelids are a notable feature distinguishing this genus from other mullets.

80.*Mugil cephalus* Linnaeus, 1758

Synonyms : *Mugil tang* Bloch, 1793,
Mugil japonicus Schlegel, 1845,
Mugil rammelsbergii Tschudi, 1845,
Mugil berlandieri Girard, 1859,
Mugil mexicanus Steindachner, 1875.

Common Name :

English : Flathead grey mullet.
Arabic : بـــــورى أصيل (Bouri Asiel).

Status : Common.

Distribution :

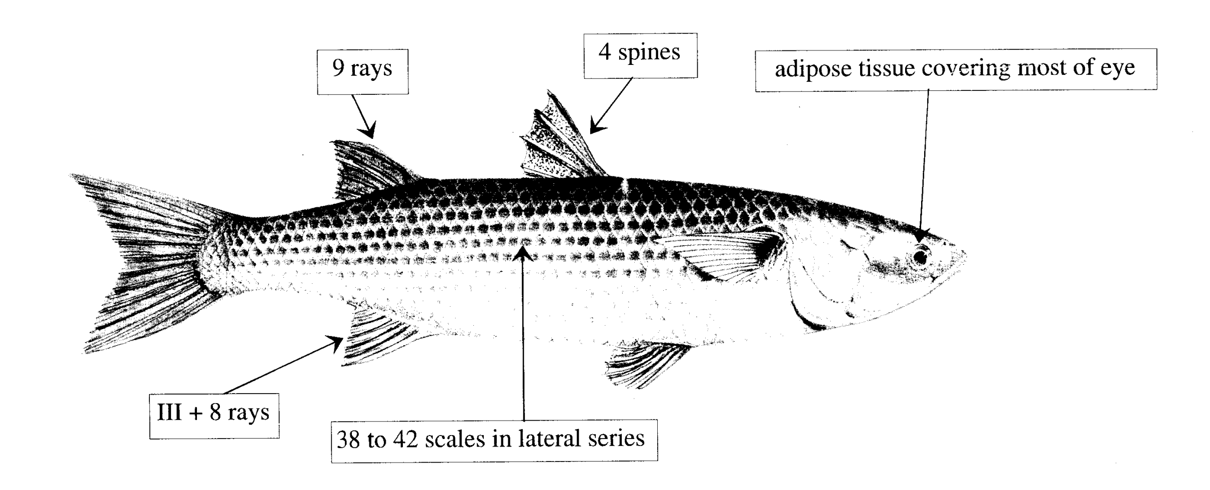
Local : Coastal lagoons, Delta and Lower Nile, Suez Canal.
World : Mediterranean, Pacific and Atlantic coasts.

Biology and Ecology :

-Pelagic, usually inshore, entering estuaries.
-Food : detritus, bottom algae, invertebrates and occasionally on plankton
-Reproduction : July-October.
-Can survive in freshwater, but does not breed in it.
-The fry of this species enter from the Mediterranean into the lagoons and Nile tributaries during August, September and October with a maximum in September.
-Length : to 60 cm.

Colour : bluish grey or greyish olive above, with darker steaks along the series of scales, silvery white beneath; fins geryish.

Economic Importance: well marketable.High-valued fish in aquaculture. The mugilid species contribute about 4.15 % of the total country catch. In 1996 the total catch was about 14,799 tons (GAFRD, 1996).



80- *Mugil cephalus* (L.) بورى أصيل

Genus : ***Liza* Jordan and Swain, 1884**

Adipose eyelid rudimentary, pointed scale at the base of the pectroal fins.

81.*Liza ramada* (Risso, 1826)

Synonyms : *Mugil ramada* Risso, 1826,
Mugil capito Cuvier, 1829,
Mugil britannicus Hancock, 1830,
Mugil dubahra Cuvier & Valenciennes, 1836.

Common Name :

English : Thinlip grey mullet
Arabic : طـــوبـــار (Toubar).

Status : Common.

Distribution :

Local : Delta, coastal lakes, Suez Canal.

World : Mediterranean and Black Sea and Atlantic coasts, North Sea and Southern part of Baltic, Southwards to Senegal.

Biology and Ecology :

-Pelagic, usually inshore, entering the Delta lagoons and the River Nile after breeding in the Sea.

-Food : Epiphytic algae, detritus and small benthic or planktonic organisms.

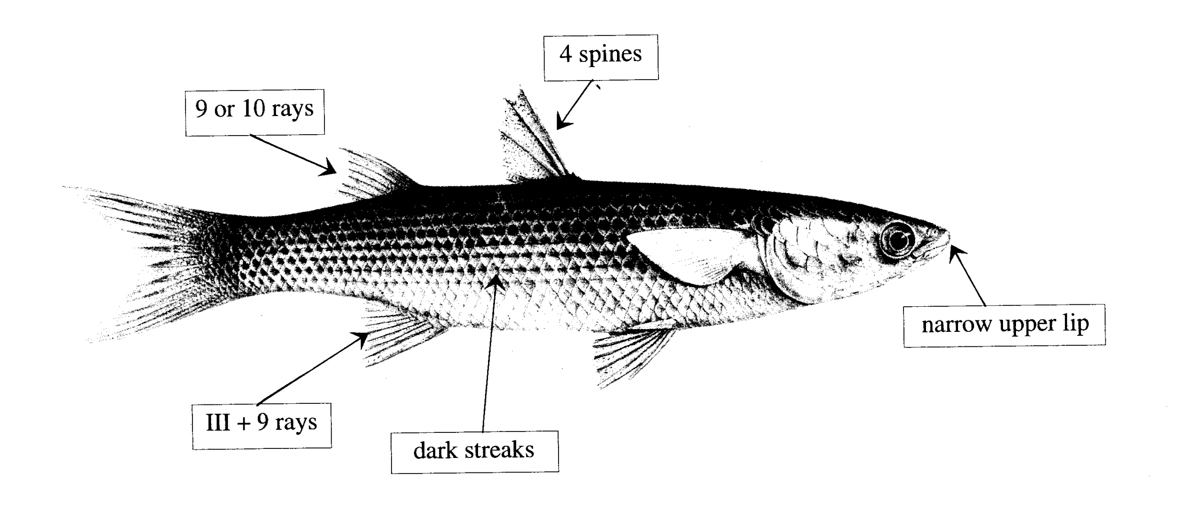
-Reproduction : October-December.

-The fry of this species enter into lagoons and Nile tributaries during the end of January till April with a maximum during February and March. Hence being preferred by aquaculturist to grow during warm seasons of the year.

-Length to 50 cm.

Colour : grey or greyish olive above, with darker streaks along the series of scales; silvery white beneath; fins greyish; often a very small dark spot in the upper part of pectoral fin.

Economic Importance: well marketable. Extensively used in aquaculture.



81- *Liza ramada* (Risso) طـوباره

82.*Liza aurata* (Risso, 1810)

Synonyms : *Mugil auratus* Risso, 1810,
Mugil chelo Lowe, 1839,
Mugil maderensis Lowe, 1842,
Mugil octoradiatus Günther, 1861,
Mugil cryptochilus Cuvier & Valenciennes, 1869.

Common Name :
English : Golden grey mullet.
Arabic: جـــــران (Gurran).

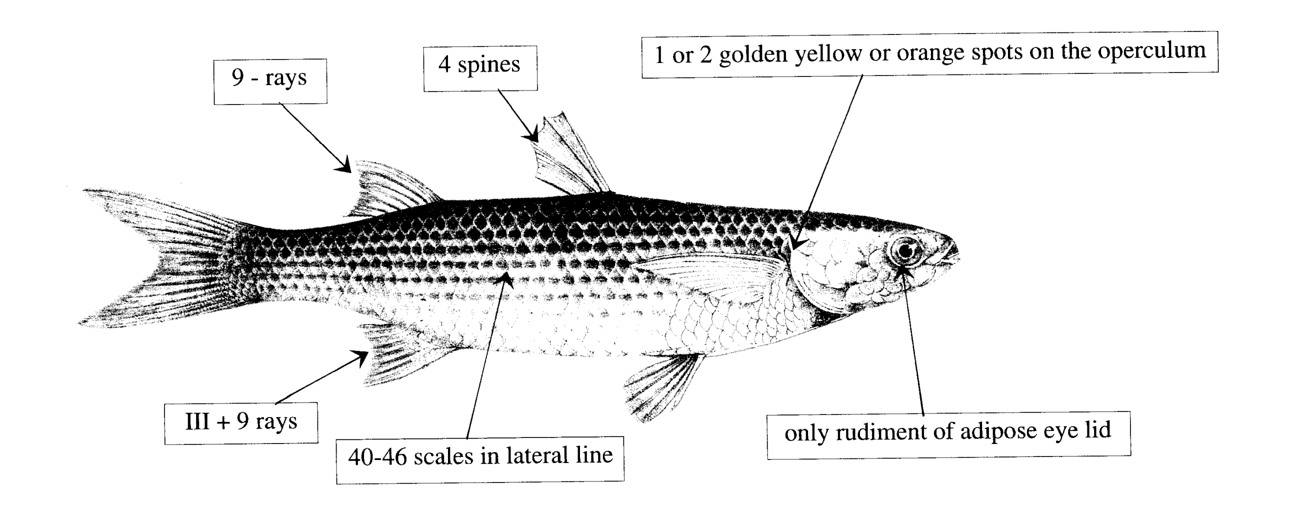
Status : Common.

Distribution :
Local : Coastal lakes, Delta, Suez Canal and Red Sea.
World: Europe, North and West Africa. Mediterranean Coast, Black Sea, Red Sea and Atlantic Coast.

Biology and Ecology :
-Pelagic, usually inshore, entering the Delta lagoons but rarely moves into freshwater.
-Food : small benthic organisms and detritus.
-Reproduction : July-November.
-Fry enter into the northern lagoons during November and December.
-Length to 40 cm.

Colour : greyish brown above, silvey white below; dark streaks along the series of scales; one or two gloden -yellow or orange spots between the eye and the border of the gill-cover; a dark red mark may be present in the centre of the golden spot; ventral and anal fins white, the other fins brownish grey.

Economic Importance : well marketable.



82- *Liza aurata* (Risso) جران

FAMILY : ELEOTRIDAE

Sleepers

Bottom-living fishes with two separated dorsal fins, similar to gobies but pelvic fins not united to form a disc. The family includes 150 species widely distributed in shallow coastal waters, estuauries and freshwaters.

Genus : ***Eleotris* Gronovius, 1763.**

A worldwide genus of fresh and estuarine waters. One species is known from freshwaters in Egypt.

83.*Eleotris nanus* Boulenger, 1901.

Synonyms : -

Common Name :

English : Sleeper

Arabic: اليوتريس نانس – السمكة النطاطة

(El Samaka El natatah).

Status : Extinct, not recorded during the last 50 years.

Distribution :

Local : It used to be caught from Lake Mariut and Upper Egypt Nile (Boulenger, 1907).

World : Lake Nubia and Nile basin.

Biology and Ecology :

-Bottom-living fish, commonly found in between root stocks in mud and prefers coastal lagoons.

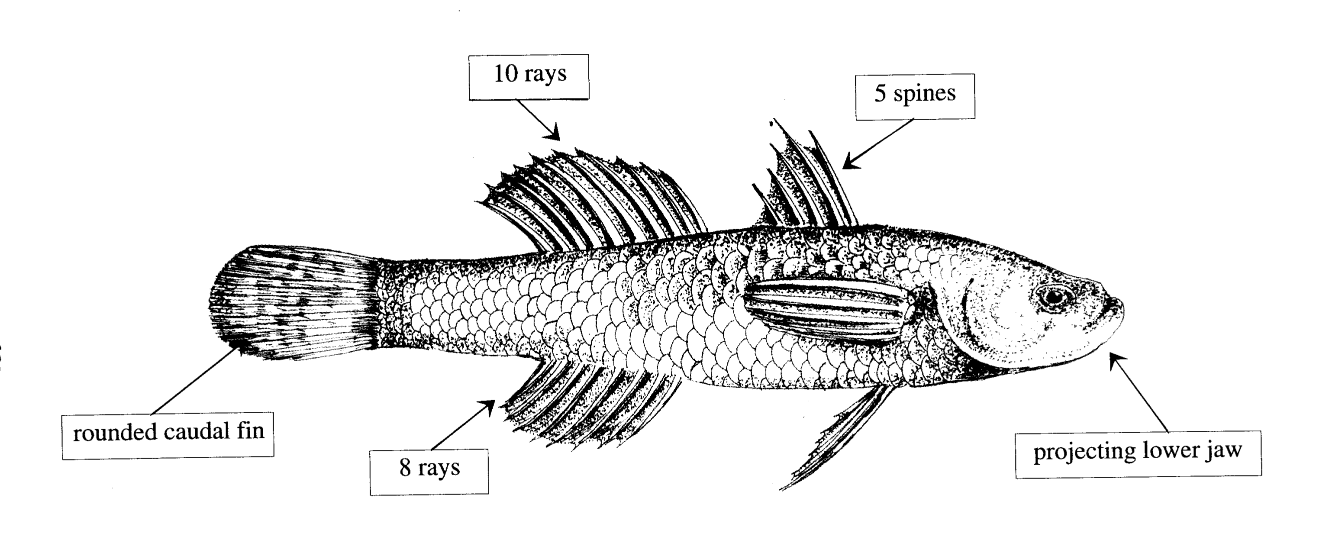
-With protractile mouth.

-Carnivorous fish.

-Average length 4 cm.

Colour : greyish olive, with the belly pinkish; the body is dotted or irregularly barred with blackish stripes. There are vertical dark bars on the sides of the head; dorsal, anal and caudal fins.

Economic Importance : unmarketable.



83- *Eleotris nanus* Blgr. السمكة النطاطة

Order ATHERINIFORMES
Silverside fishes

FAMILY : ATHERINIDAE

Small silvery fishes with a divided dorsal fin, the first spinous, the second with one spine and soft rays. A bright silvery band along the body gives the common name of "silversides".

Genus : ***Atherina*** **Linnaeus, 1758**

One species is known from freshwater habitats of Egypt.

84. *Atherina (hepsetia) boyeri* Risso, 1810

Synonyms : *Atherina hepsetus* Delaroche, 1809,
Atherina mochon Cuvier 1829,
Atherina lacustris Bonaparte, 1836,
Atherina caspia Eichwald, 1838,
Atherina pontica Eichwald, 1874,
Atherina boieri Deperet, 1883,
Atherina hyalosoma Facciola, 1885,
Atherina requeti Roule, 1902.

Common Name : English : Silverside

Arabic: بساريا (Bessaria).

Status : Common.

Distribution :

Local : Lower Nile and coastal lakes.

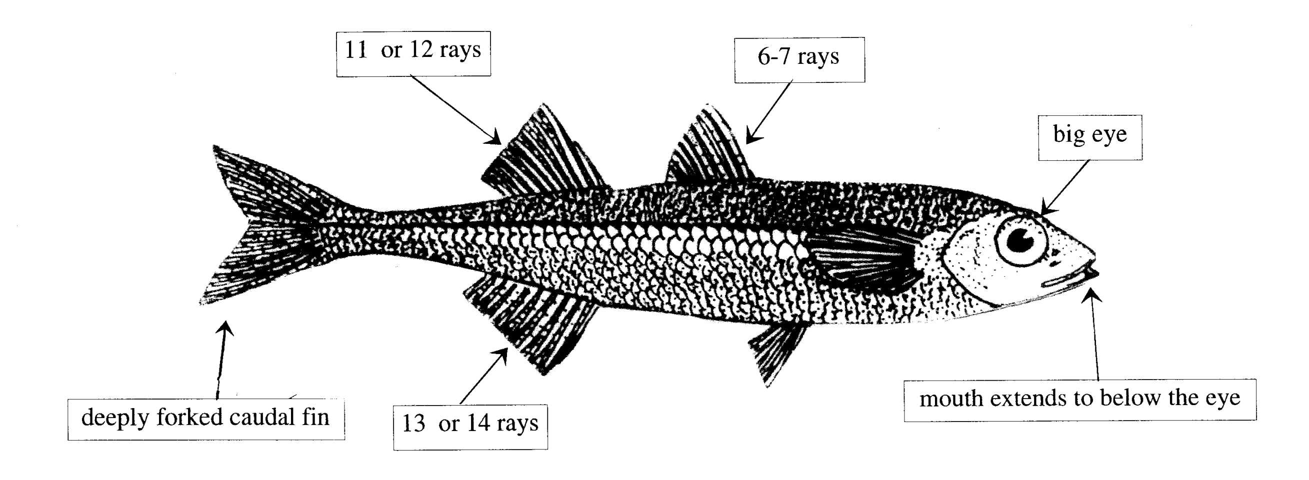
World: Italy, Algeria, Mediterranean coasts, Black Sea, Atlantic from southern Spain to Morocco, Madeira.

Biology and Ecology :

- Pelagic, littoral, often near shore.
- Food : pelagic copepods and benthic crustaceans.
- Reproduction : December-May.
- Length: to 20 cm, usually 15 cm.

Colour : translucent, dark above, with a bright silvery lateral band along the body.

Economic Importance : its production in 1996 was about 6642 tons, i.e. it contributes about 1.86 % of the total country catch (GAFRD, 1996).



84-*Atherina boyeri* Risso بســاريا

Order TETRAODONTIFORMES
Plectognath Fishes
No pelvic fins. Teeth joined into a beak. Scales not visible. Body rounded.

FAMILY : TETRODONTIDAE.

Pufferfishes

A predominately marine family, with only one freshwater specis.

Genus : ***Tetrodon*** **Linnaeus, 1762**

85. *Tetrodon linneatus* Linnaeus, 1766

Synonyms : *Tetrodon fahaka* Linnaeus, 1762,
Tetrodon physa Geoffroy, 1809,
Tetrodon strigosus Bennett, 1834,
Crayracion fahaka Steindachner, 1870.

Common Name :

English : Stripped Puffer - Freshwater Puffer Fish
Arabic : فهقة أصيلة – حمار البحر
(Fahaka Assielah - Homar El Bahr).

Status : Endangered.

Distribution :

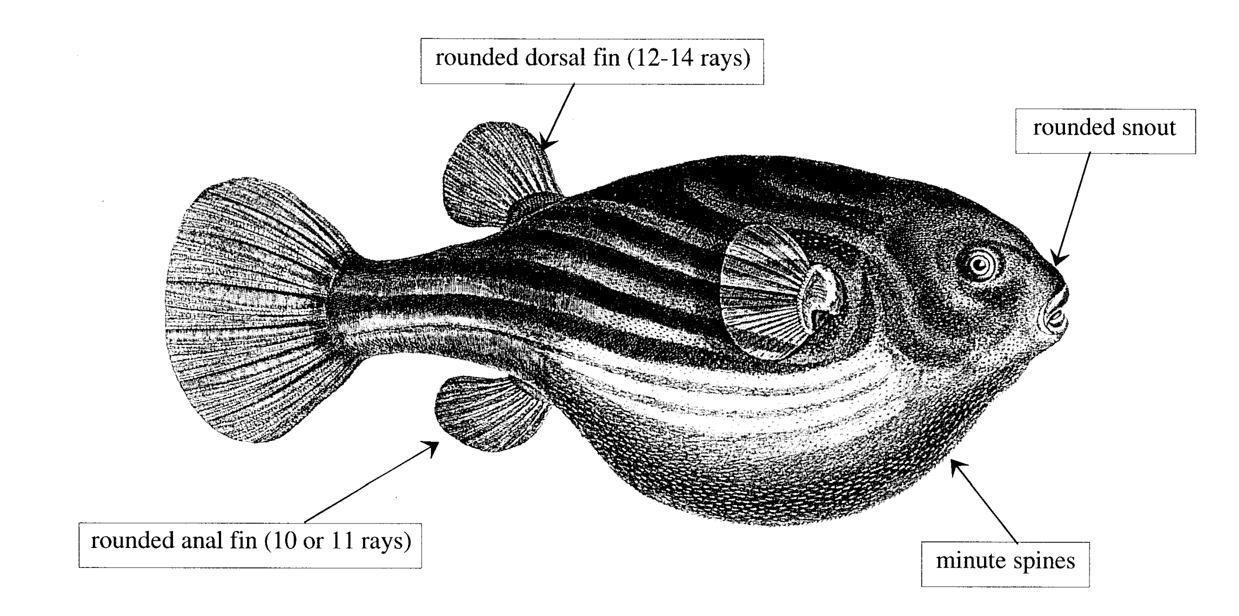
Local : Lower and upper Nile and Lake Nasser.
World: Lake Nubia, Blue and White Niles, Niger, Senegal and Congo.

Biology and Ecology :

-It rises to surface to inflate its body resembling a ballon. This inflation is useful to the fish as it is less easily seized by predaceous fishes.
-It prefers shallow waters and lives on sandy or muddy bottoms.
-Food : molluscs, bottom animals and insect larvae.
-Length : to 45 cm.

Colour: the upper parts are dark olive-grey, the lower parts and the dorsal, anal and pectoral fins yellow, the caudal is dark olive; black stripes run along the sides of the body and the caudal peduncle.

Economic Importance : unmarketable. Some authors reported that its flesh may be poisonous due to the presence of tetradontoxine.



85- ***Tetrodon linneatus*** **(L.)** **فهقة - حمار البحر**

FAMILY : CYPRINIDAE

Mouth with 2 pairs of barbels, anal fin with 5 branched rays, more than 32 lateral line scales.

86.*Cyprinus carpio* Linnaeus, 1758

Synonyms : none

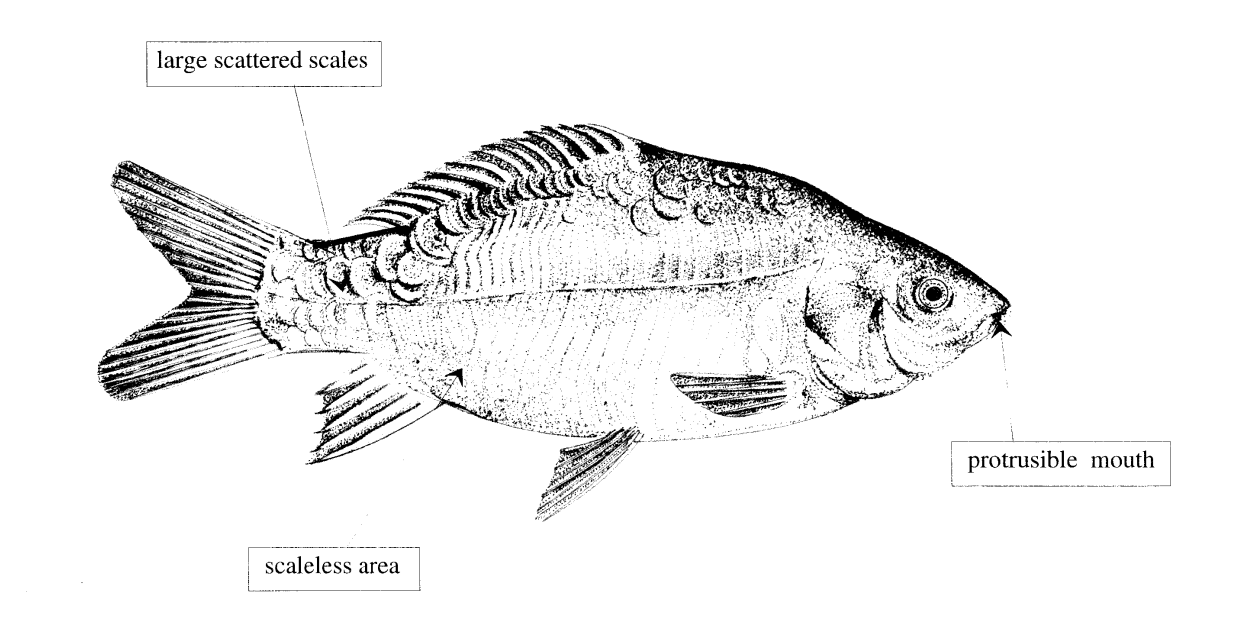
Common Name :
English : Common or Mirror carp
Arabic : مبـــروك عـــادى (Mabrouk Aadi).

Native Range : Japan, China, Central Asia to the Black Sea and the Danube in Europe.

Biology and Ecology :
- -Introduced from Indonesia in 1934 for aquaculture.
- -It prefers stagnant water.
- -It does not spawn naturally in the Nile water, but only artificially in hatcheries.
- -In its natural habitat, it breeds in spring and summer, laying sticky eggs in shallow vegetation.
- -Large females are reported to lay in excess of a million eggs.
- -It feeds on benthic animals and detritus (omnivorous).
- -Maximum length 80 cm.

Colour : variable from olive brown to brazen gold, fins dark grey.

Economic Importance : used for aquaculture. Considered a pest by conservation authorities because of its destructive feeding habits, and degradation of the aquatic environment mainly through its habit of rooting in the bottom which causes turbidity and deoxygenated conditions.



86- *Cyprinus carpio* L. مبروك عادى

87.*Hypophthalmichthys molitrix* (Valenciennes, 1844).

Common Name :

English : Silver Carp

Arabic : مبـــروك فضى (Mabrouk Feddy).

Native range : Amur and Yangtze rivers in China, Central Asia and Eastern Siberia.

Biology and Ecology :

-Introduced form Japan in 1962.

-It prefers stagnant or slow-flowing waters, able to live in slightly brackish water.

-It does not spawn naturally in the River Nile, but only artificially in hatcheries.

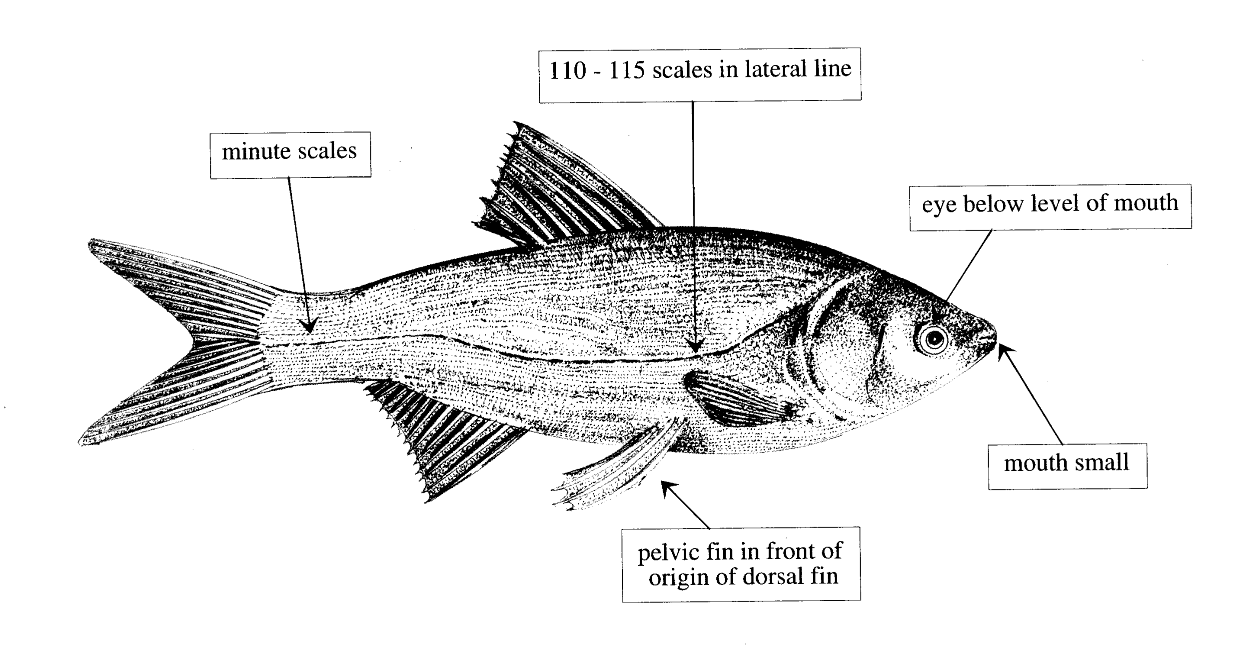
-In natural range migrates upstream to breed; eggs and larvae float downstream to floodplain zones.

-It feeds on phytoplankton in midwater i.e primary planktonophage, when kept in ponds it feeds well on artificial food such as bean meal, rice bran and flour.

-An active species well known for its habit of leaping clear of the water when disturbed.

-Attains 1 m of total length and 22 kg of weight.

Economic Importance : used in aquaculture (reproduces artificially).
It may be used alone for the control of algal blooms.



87- *Hypophthalmichthys molitrix* (Val.) مبروك فضى

88.*Ctenopharyngodon idella* (Cuvier & Valenciennes, 1844)

Common Name :

English : Grass Carp

Arabic : مبـــروك الحشائش (Mabrouk Hashaash).

Native range : Amur River, great rivers of China and Eastern Siberia. Umgeni above Nagle Dam and farm dams in Natal. Lake Victoria (Germiston) on a tributary of the Vaal, Transvaal.

Biology and Ecology :

-Introduced form Hong-Kong in 1969, to control floating and submerged plants in the Nile and its tributaries. In 1979 it was introduced from Holland where it is reared in Egypt in two major stations; ELQnater, near Cairo and Aswan to produce fish to be stocked in water canals rich in aquatic vegetation.

-Tolerant of a wide range of temperatures from 0 to 38 ^{o}C and salinities to as much as 10 ‰ .

-It prefers rivers and lagoons with vegetation.

-It does not spawn naturally in the River Nile.

-In its natural habitats, it breeds in flowing water of rivers rising in flood; the eggs and larvae float in the water.

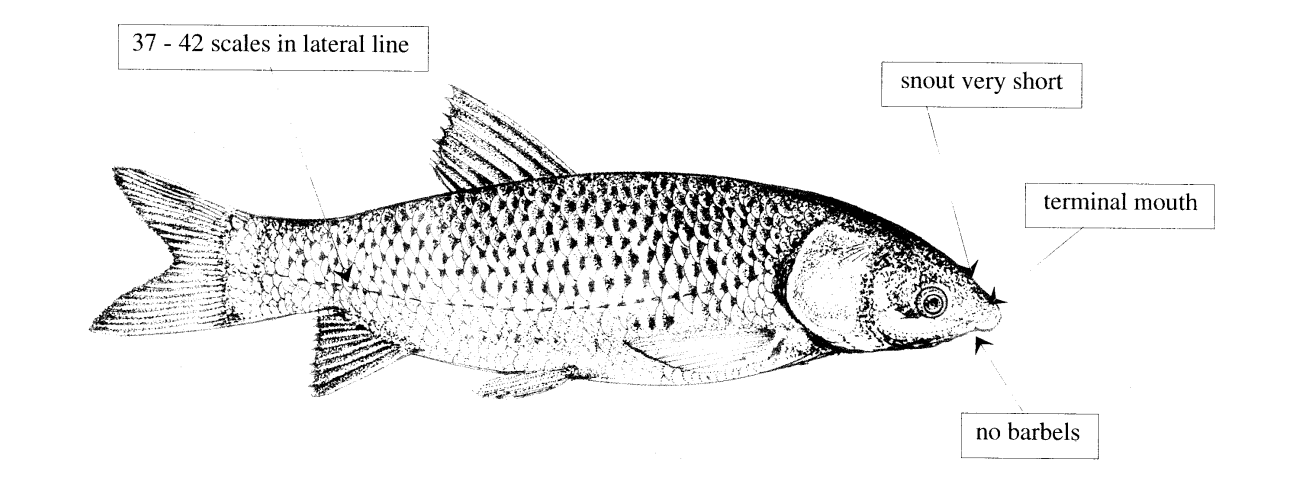
-It feeds mainly on floating and submereged vegetation as well as filamentous algae.

-Reported to live for up to 50 years in China.

-Maximum length 120 cm and 50 kg weight.

Colour : silvery body; head and fins dark grey.

Economic Importance : used for weed control. Has angling and aquaculture potentials.



88- *Ctenopharyngodon idella* (C. & V.) مبروك الحشائش

89. *Aristichthys nobilis* Richardson

Synonyms : ***Hypophthalmichthys (Aristichthys) nobilis***

Common Name :

English : Bighead Carp

Arabic : مبــروك كبيــر الرأس (Mabrouk Kabier Elras).

Native range : China rivers, Asian waters and Eastern Siberia.

Biology and Ecology :

-Introduced form Hong-Kong in 1980 for aquaculture.

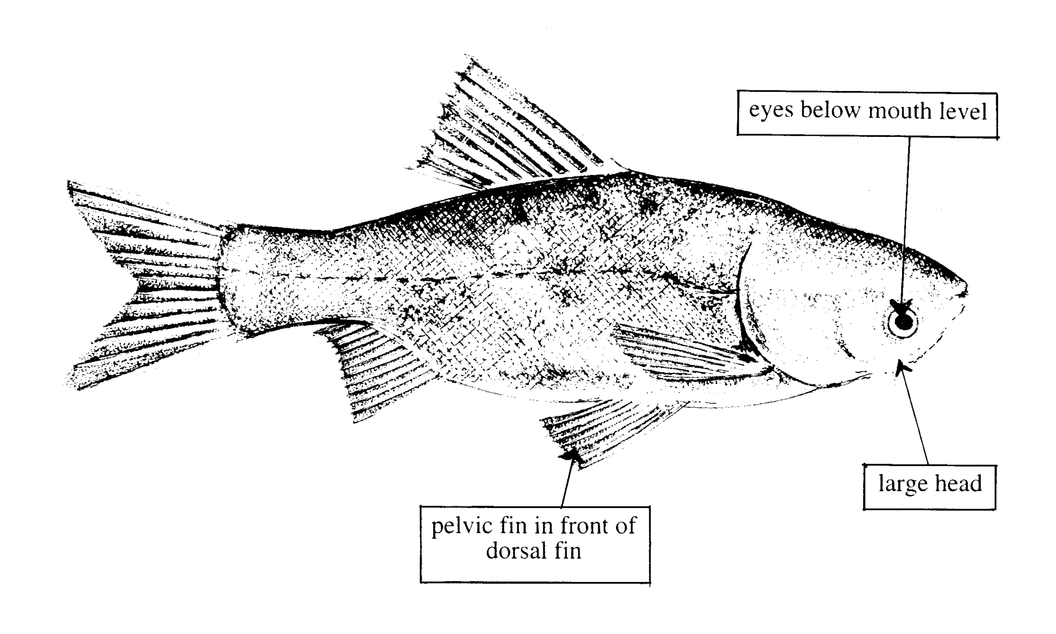
-It prefers warm waters (30-31°C) and growth slows down considerably under 20 °C.

-It prefers slow-flowing water.

-It does not spawn naturally in the River Nile.

-It feeds mainly on plankton such as flagellates, dinoflagellates, bacillariophytes and zoo-spores of conjugales and Chlorophyceae. Zooplankton , if available, is taken with phytoplankton.

Economic Importance : used for aquaculture, grows in ponds to 7 kg in weight.



89- *Aristichthys nobilis* Rich. **مبروك كبير الرأس**

90. *Mylopharyngodon piceus* (Richardson)

Synonyms : none.

Common Name :

English : Black or snail Carp

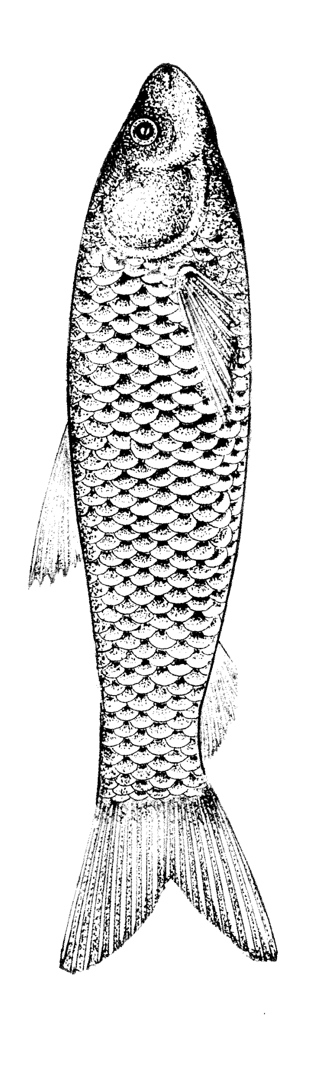
Arabic : مبـروك أســـود (Mabrouk Aswad).

Native range : China and Malaysia.

Biology and Ecology :

- -Introduced form Israel in 1993 to control *Schistosoma* snails.
- -It prefers stagnant or slow-flowing waters.
- -It does not spawn naturally in the River Nile.
- -It attains a length of 5-12.5, 30-40 and 65 cm at the end of the first, second and third years, respectively. In lakes and rivers the fish attains a length of 1.5 - 1.8 m and a weight of about 15 kg.
- -It feeds mainly on molluscs, i.e. molluscivorous. Pond fish are often fed with snails collected from streams and lakes.

Economic Importance : used for aquaculture.



90- *Mylopharyngodon piceus* (Rich.) **مبروك أسـود**

FAMILY : CICHLIDAE.

91.*Oreochromis (mossambicus) korogwe* (Peters, 1852).

Synonyms : *Oreochromis mossambicus* (Peters, 1852),
Tilapia mossambica Peters,1852,
Chromis niloticus Pfeffer, 1893.

Common Name :

English : Mozambique tilapia
Arabic : بلطى مــوزمبيقى (Bolti Mozambique).

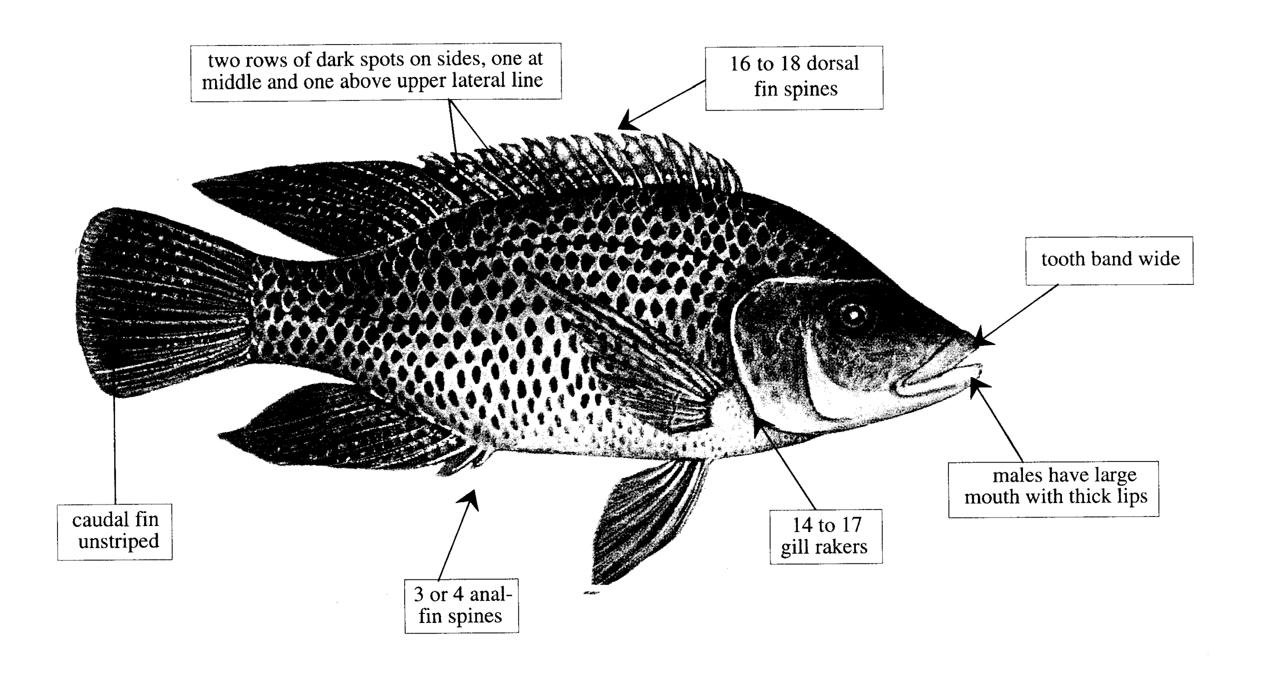
Native range : Lower Zambezi and associated East African rivers.

Biology and Ecology :

-Introduced form Thailand in 1954 for aquaculture.
-Thrives in standing waters.
-Tolerant of fresh, brackish or marine waters and even higher salinity concentrations, even to the extent of occupying some marine environments.
-Survives lower temperatures (below about 15 ^{o}C).
-Prefers warm temperatures (above 22 ^{o}C) but tolerates to about 42 ^{o}C.
-Feeds on algae, but large individuals may take insects and other invertebrates.
-Breeds in summer, and the female mouth-broods the eggs, larvae and small fry.
-Grows rapidly and may mature and breed within a year.
-Length up to 40 cm.

Colour : juveniles silvery, with 6-7 vertical bars, 3 spots along flanks. Adults silvery olive to deep blue-grey, dorsal and caudal fins with red margins. Breeding males turn deep greyish black with white lower head and throat.

Economic Importance : used for aquaculture. It is also used extensively in biological, physiological and behavioural research. It is mainly used for the production of monosex hybrids especially with *O. niloticus*.



91- *Oreochromis (mossambicus) korogwe* Peters بلطى موزمبيقى

92.*Oreochromis spilurus* (Günther)

Synonyms : none.

Native range : Coastal rivers of Kenya and Somalia.

Common Name :

English : Tilapia

Arabic : بلـــــطى سبيلورس (Bolti).

Biology and Ecology :

-Introduced form Kenya in 1986 for aquaculture.

-Three geographic subspecies and stocking with mixtures of these and with other *Oreochromis* species resulted in extensive hybridization.

-Fast growing species, saline tolerant.

-A good grazer on epiphyic algae and therefore could possibly fill this niche in polyculture.

Economic Importance : used for aquaculture, but no definite studies had been carried out on this species to evaluate its suitability in aquaculture.

93.Red Tilapia

A hybrid between two species of *Tilapia* which may be :
1- *O. mossambicus* ♂ x *T.* sp. ♀ European fashion
2- *O. mossambicus* ♀ x *T.* sp. ♂ American fashion
Thirty species are known to form 114 hybrid crosses (Schwartz, 1983)

Common Name :

English : Red tilapia
Arabic : بلطى أحمر (Bolti Ahmar).

Biology and Ecology :

-Introduced form France in 1984 and from Bahamas in 1993 for aquaculture.
-It tolerates a wide range of salinities.

Economic Importance : used for aquaculture and decorations.

FAMILY : POECILIIDAE.

Live-bearers

Unique fish for bearing young. Male caudal fin modified to form a gonopodium or intermoittent organ.

Genus : **Gambusia**

94.*Gambusia affinis* (Baird & Girard, 1853)

Common name :

English : Mosquito fish

Local : Gambosia (جامبوزيا – آكل الناموس)

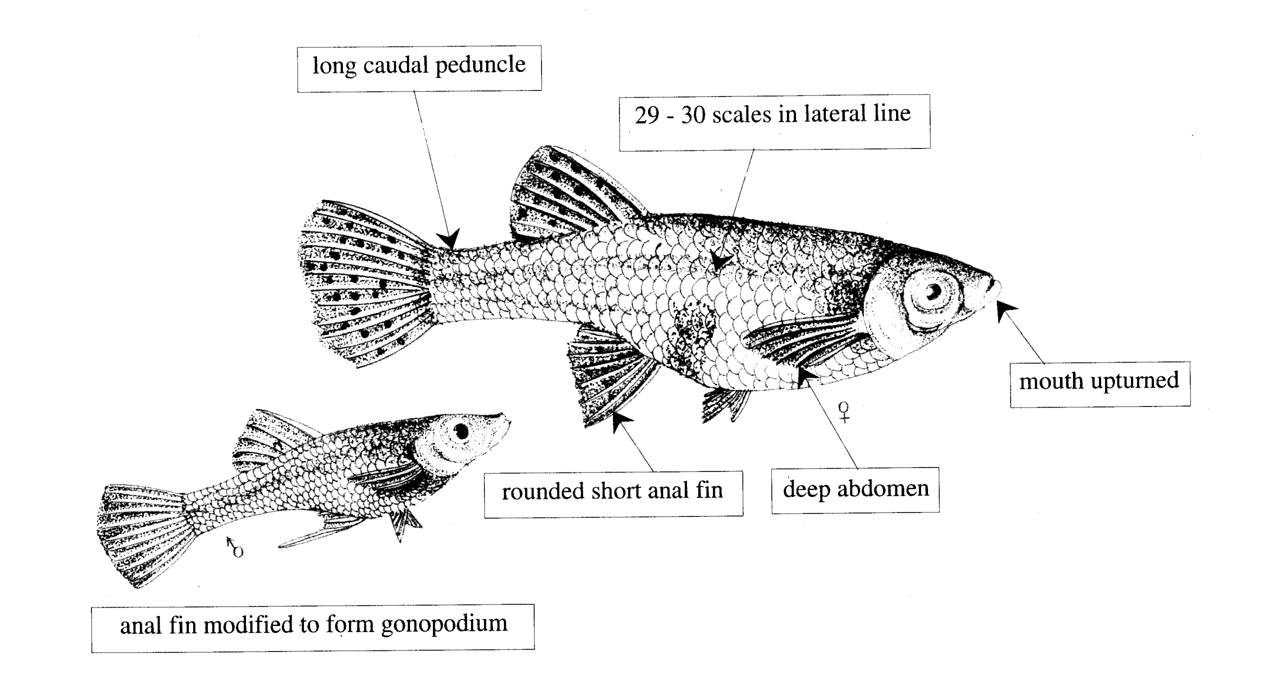
Native range : Central and South America

Biology and Ecology :

- -It has been introduced into Egypt in 1929 to control mosquito larvae.
- -Requires standing water with plant cover.
- -Tolerant to a wide range of temperatures (4-38 °C) and salinites from fresh to higher than sea water.
- -Feeds on small live organismis especially mosqiuto larvae and fish larvae. Known to rip fish fins.
- -Eggs fertilized internally, fully developed young are borne.

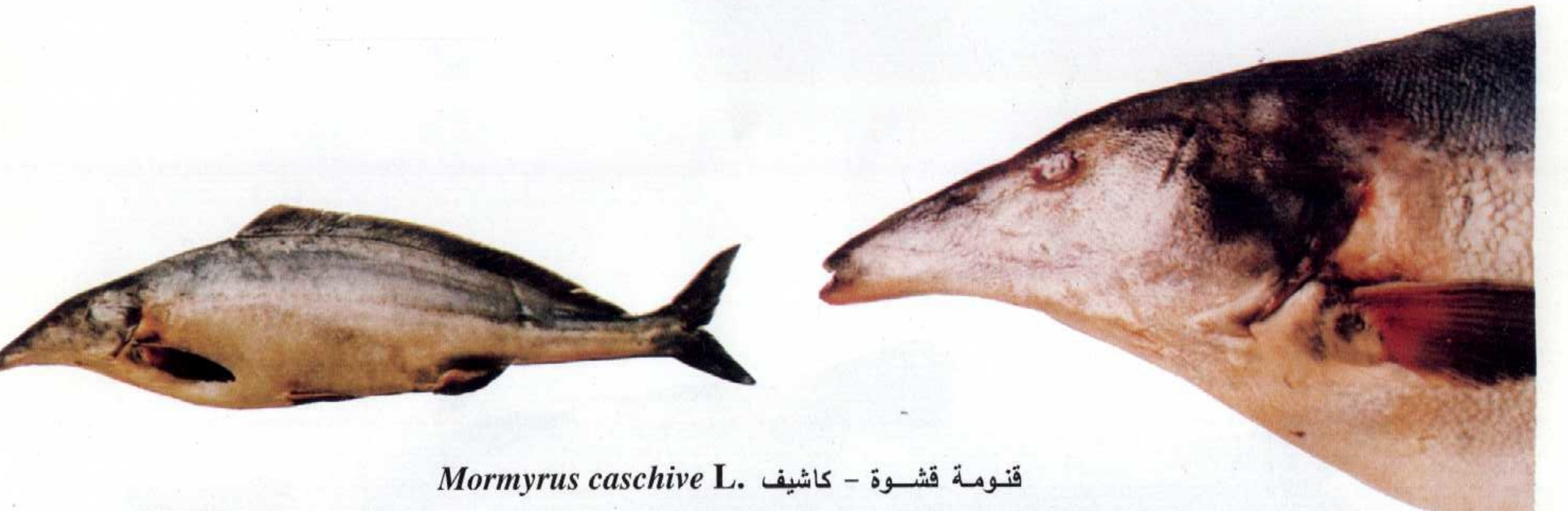
Economic importance :

- -Used as a mosquito control agent, but with no evident effect.
- -It has proved to be an agressive invador species capable of restricting other fish populations by preying on fish` larvae.



94- *Gambusia affinis* (B. & G.) جامبوزيـا - آكل الناموس

PLATE 1



Mormyrus caschive L. قنومة قشـوة - كاشيف





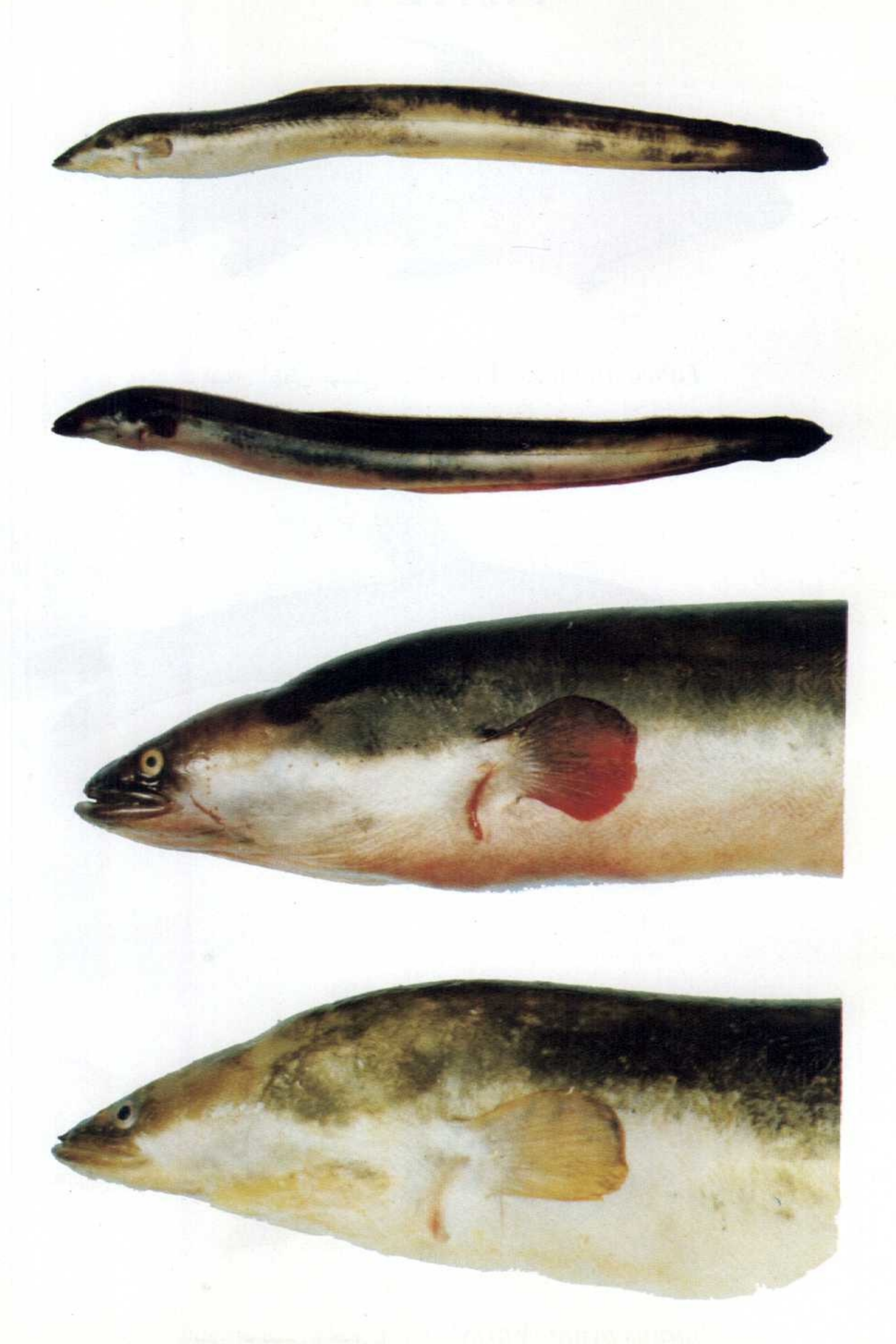
Mormyrus kannume **Forssk.** أنومــه - أم بـويـز

PLATE 2



Mormyrus niloticus **(Bl. Schn.)** أنومـــه نيلية

PLATE 3

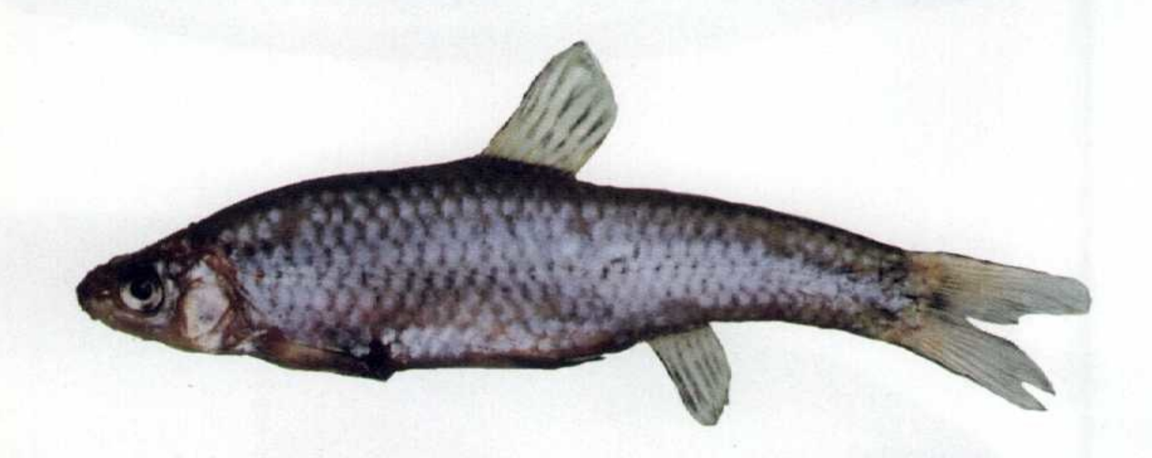


Anguilla anguilla **(L.)** ثعبـــان السمــك - حنــش

PLATE 4



Labeo niloticus **(Forssk.)** لبيس أبيض نيـــلى



Garra dembeensis **(Rüpp.)** أبـــو قـــرص فينسيجرا



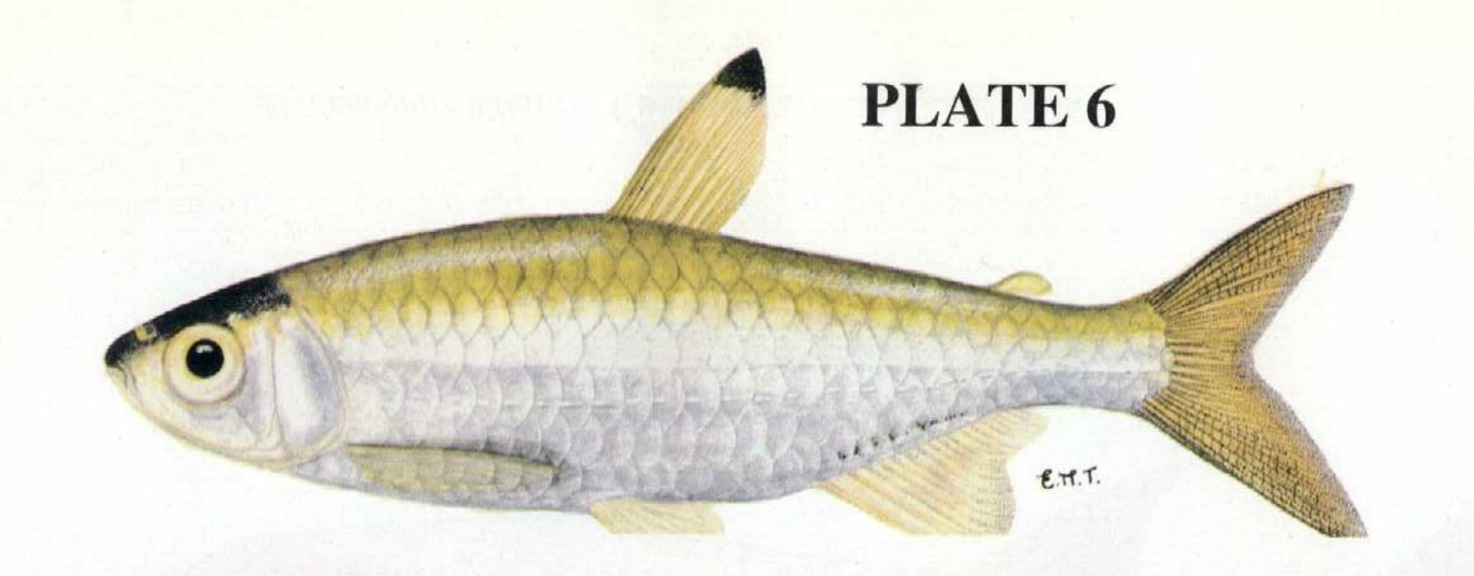
Barbus bynni **(Forssk.)** بنى أصيـــل (أصلى)

PLATE 5



***Hydrocynus vittatus* (Castel.)** كلب البحر المخطط

PLATE 6

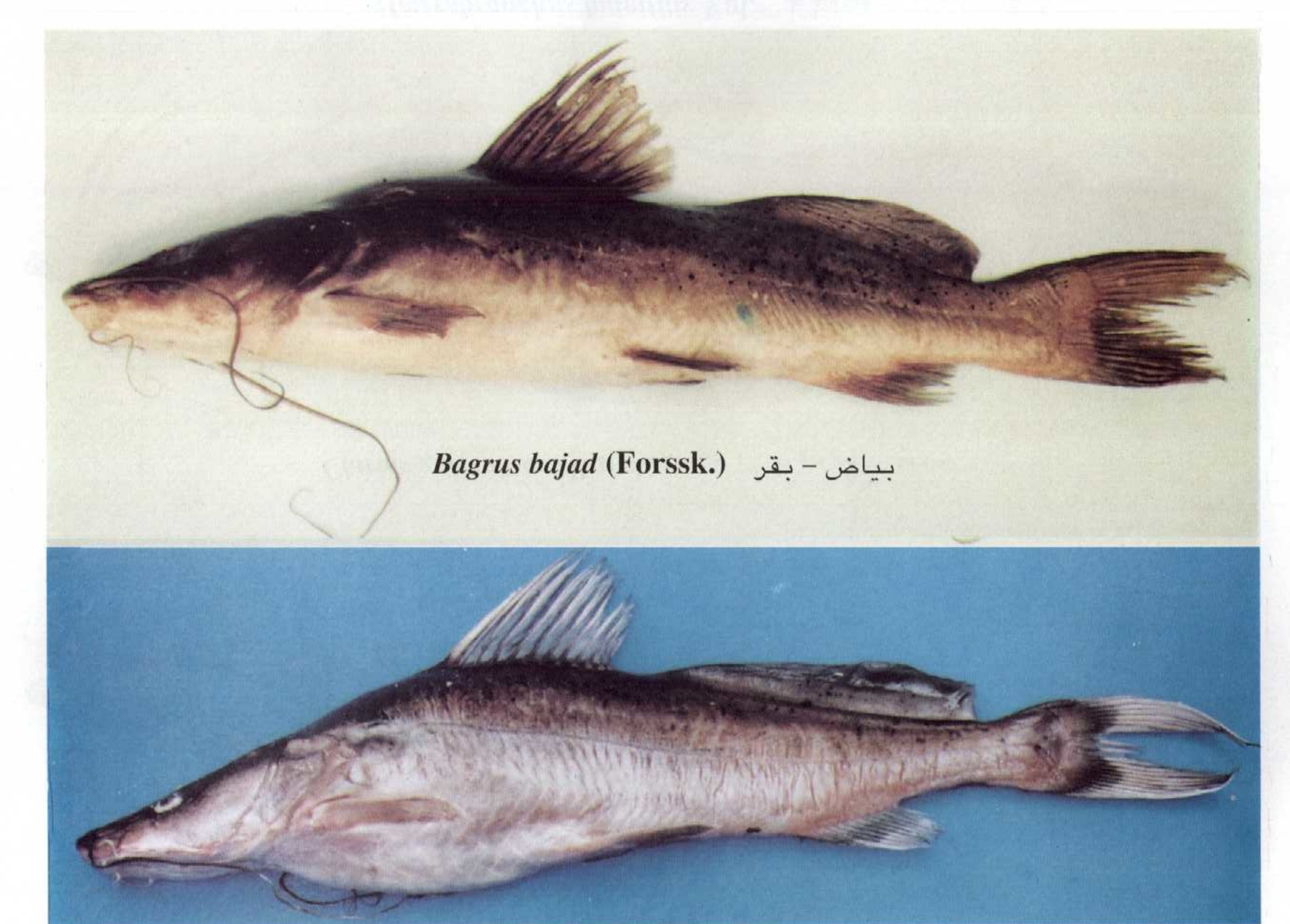


Micralestes acutidens **(Peters)** ميكر الستس - حـــاد الأســـــنان



Brycinus nurse **(Rüpp.)** راي سرديـنـــه نورس

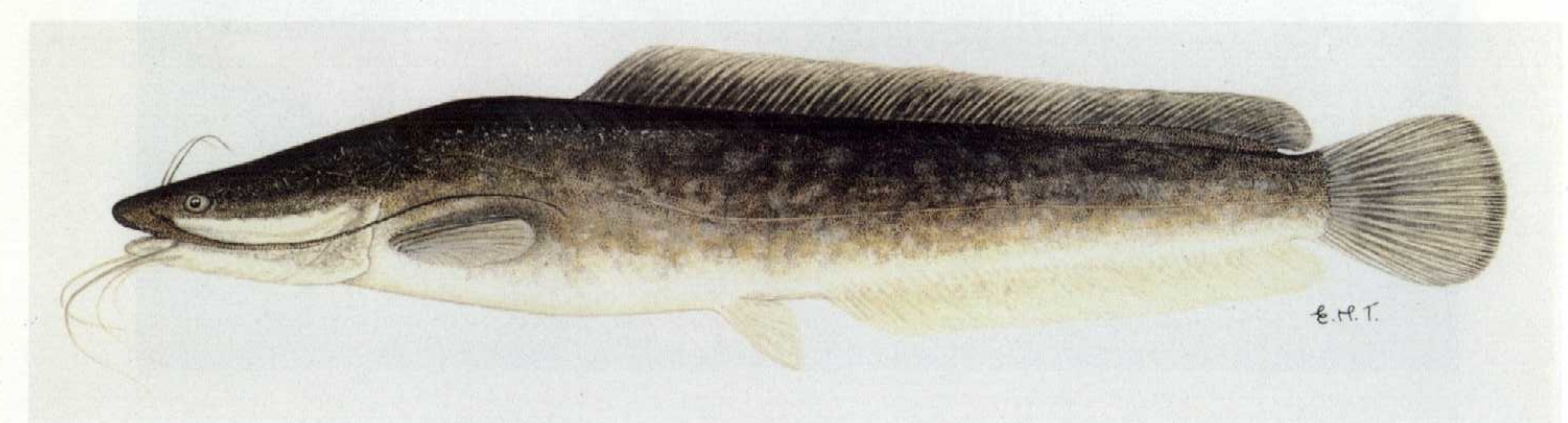
PLATE 7



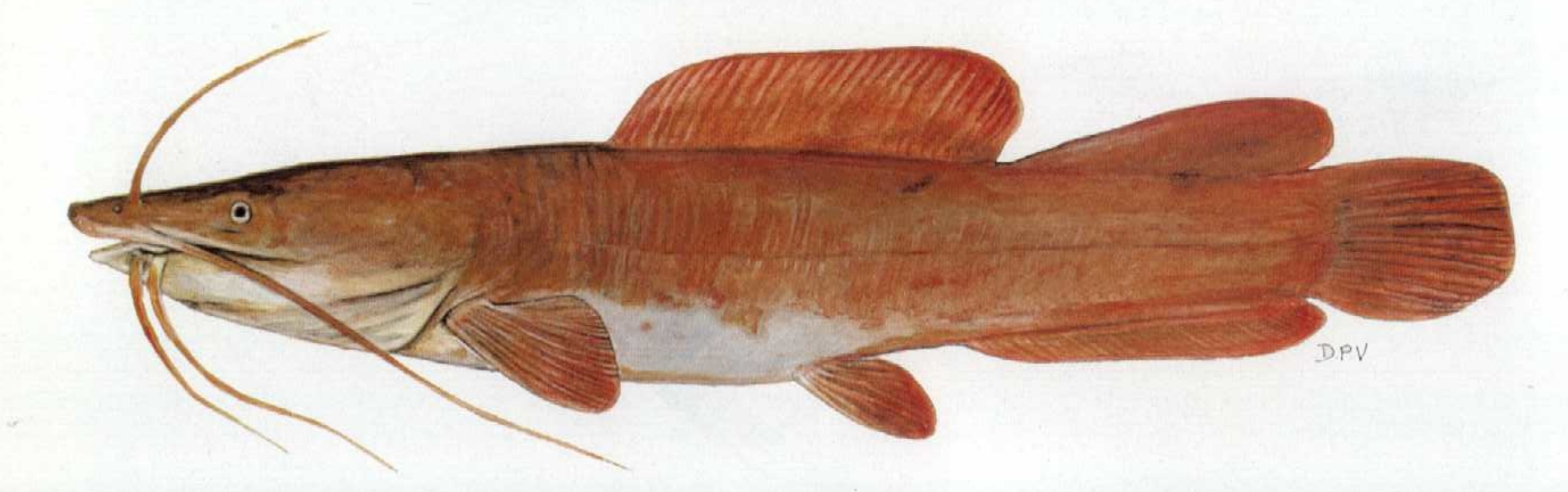
Bagrus bajad (**Forssk.**) بياض - بقر

Bagrus docmak (**Forssk.**) بقر دقماق

PLATE 8

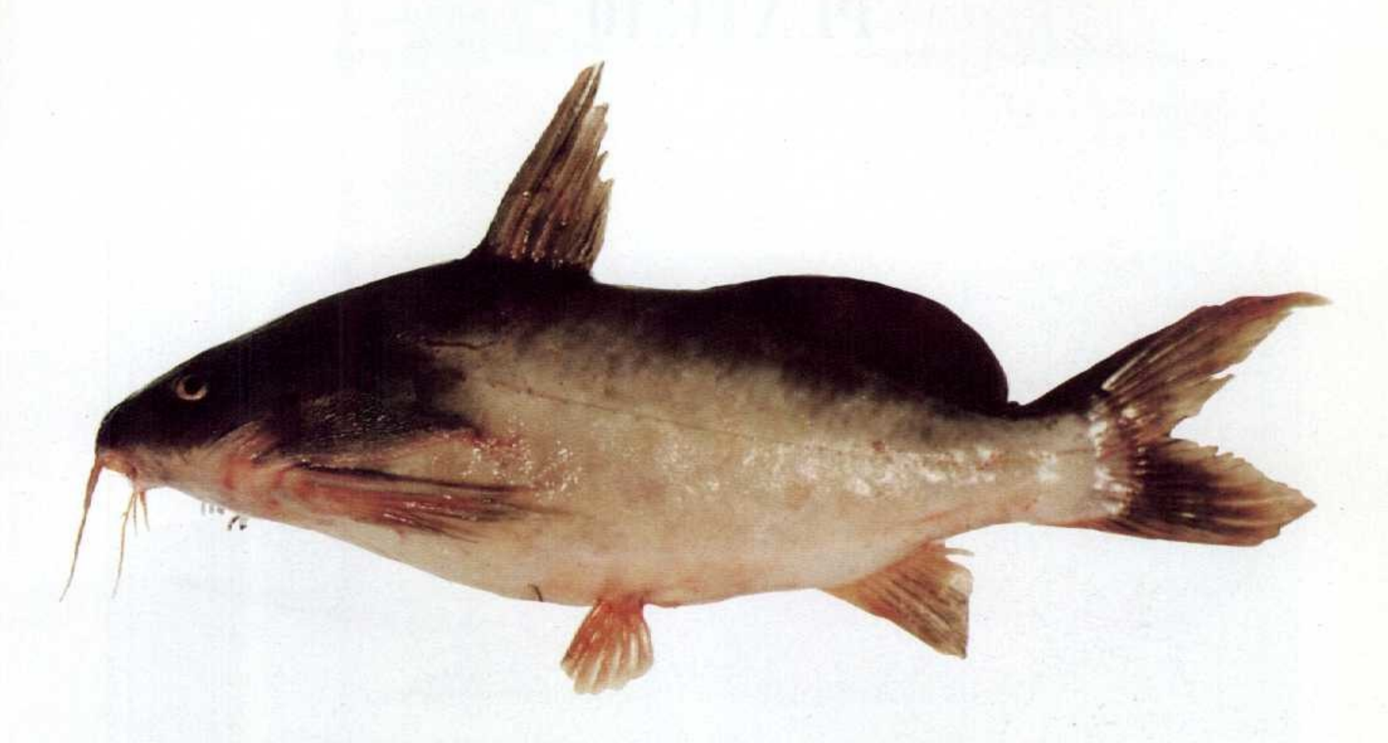


Clarias gariepinus **(Burch.)** حوت - قرموط لازير

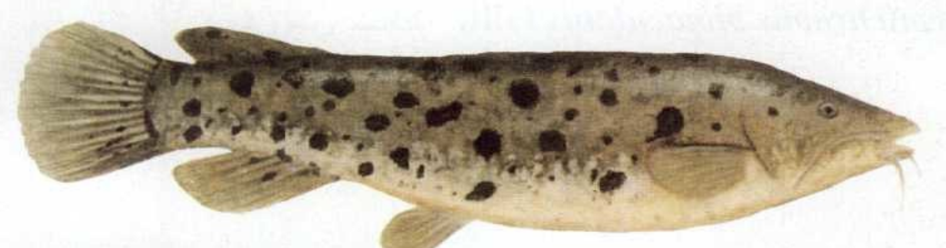


***Heterobranchus longifilis* Val.** كركور أصلي - قرموط

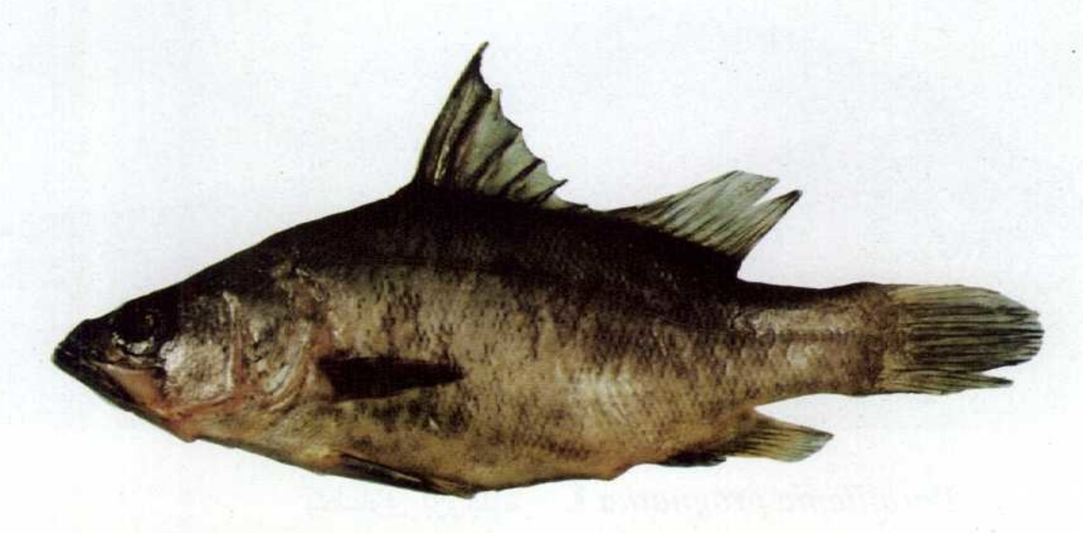
PLATE 9



Synodontis schall (Bl. & Schn.) قرقور شال - شيلان

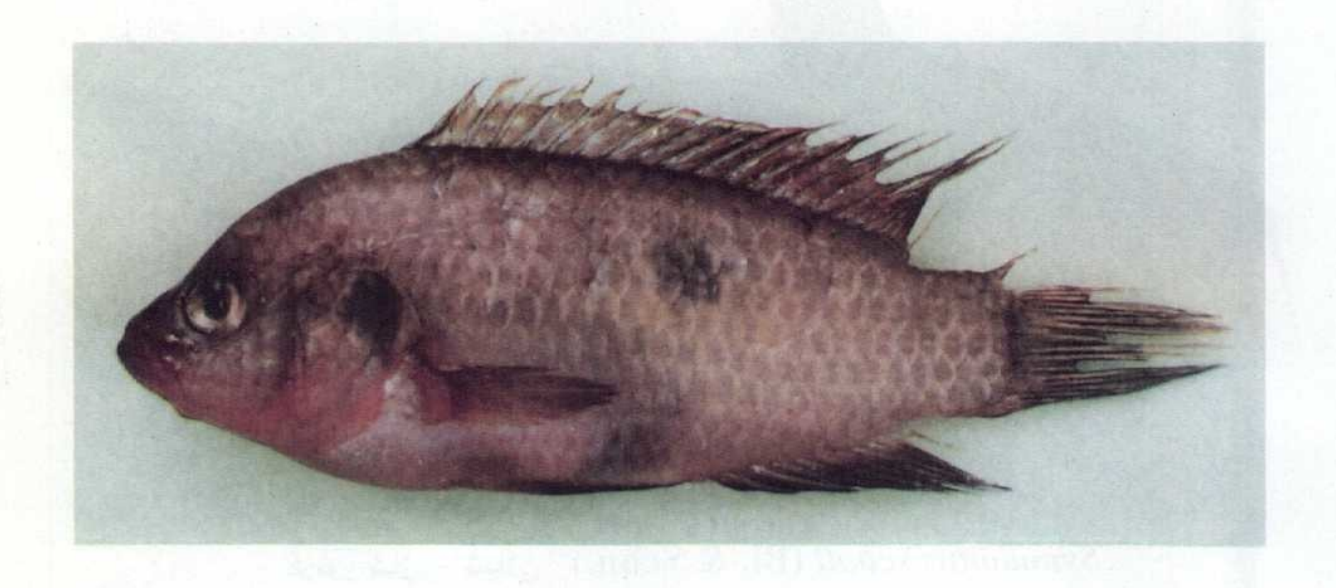


Malapterurus electricus (Gm.) رعاش افريقى - رعـــاد



Lates (Lates) niloticus (L.) قشر بياض - ساموس

PLATE 10



Hemichromis bimaculatus Gill. هيمكرومس مخطط



Paratilapia prognatha L. بلطـاوى بروجناتا

PLATE 11



Tilapia zillii (Gerv.) بلطى أخضر

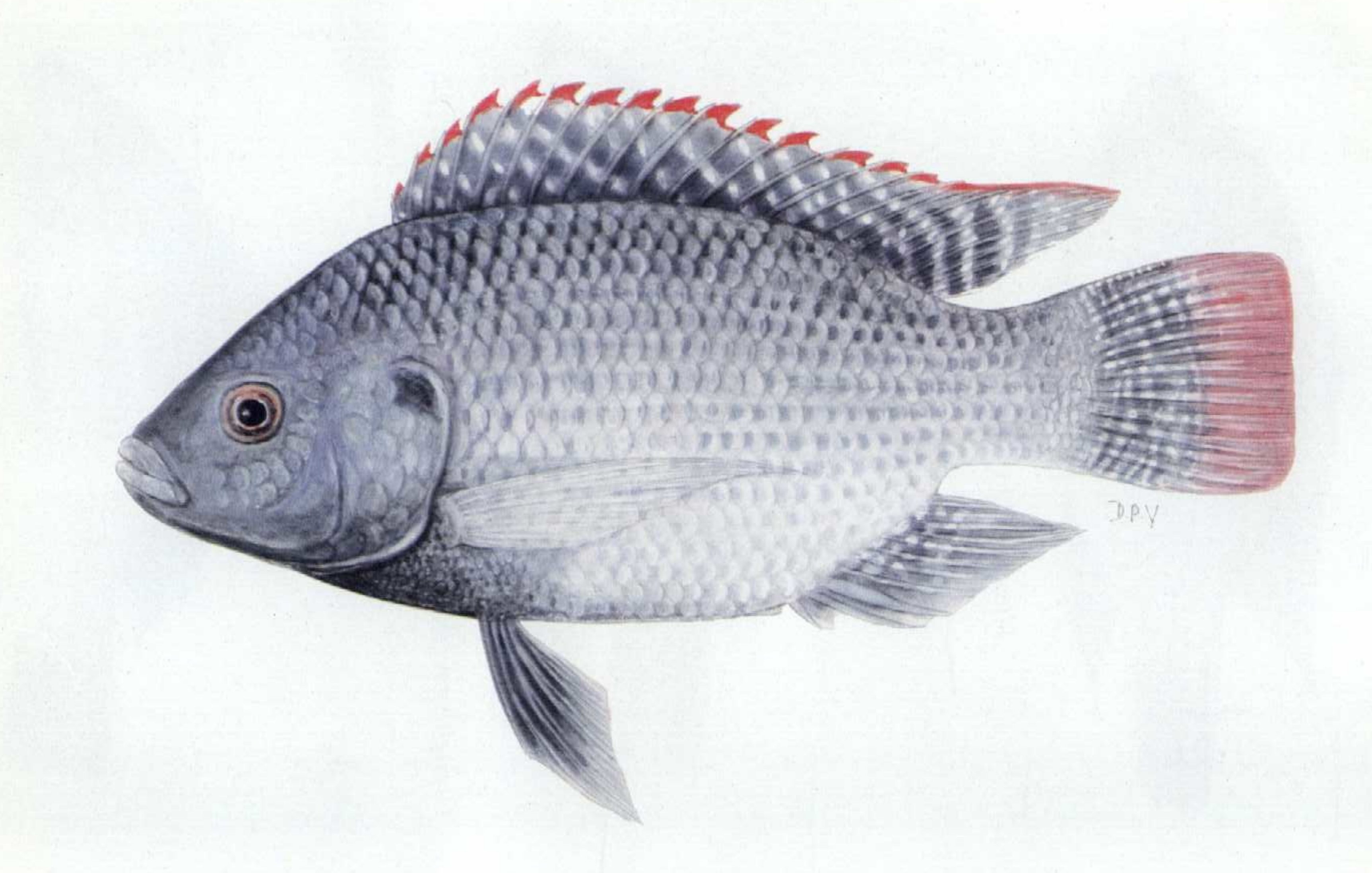


Oreochromis niloticus niloticus (L.) بلطى أبيض - بلطى نيلى



Sarotherodon galilaeus (Art.) بلطى مولاى -بلطى جليلى

PLATE 12



Oreochromis aureus **(Steind.)** بلطي أزرق - بلطي حساني

PLATE 13



Dicentrarchus labrax (L.) قـــاروص



Mugil cephalus (L.) بورى أصيل

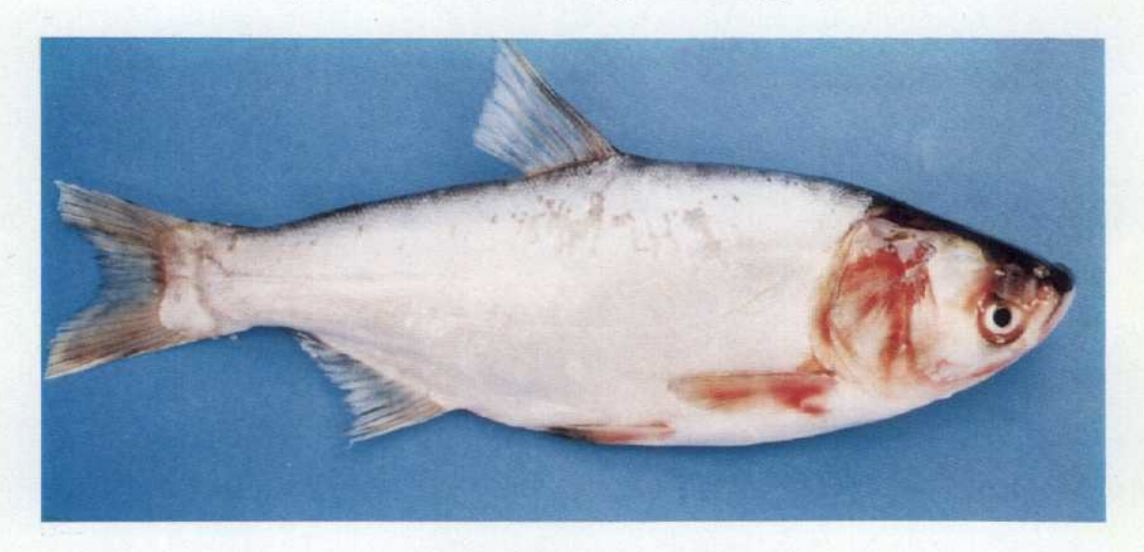


Liza ramada (Risso) طـــوباره

PLATE 14



Cyprinus carpio L. مبـــروك عـــادى



Hypophthalmichthys molitrix Val. مبروك فضى



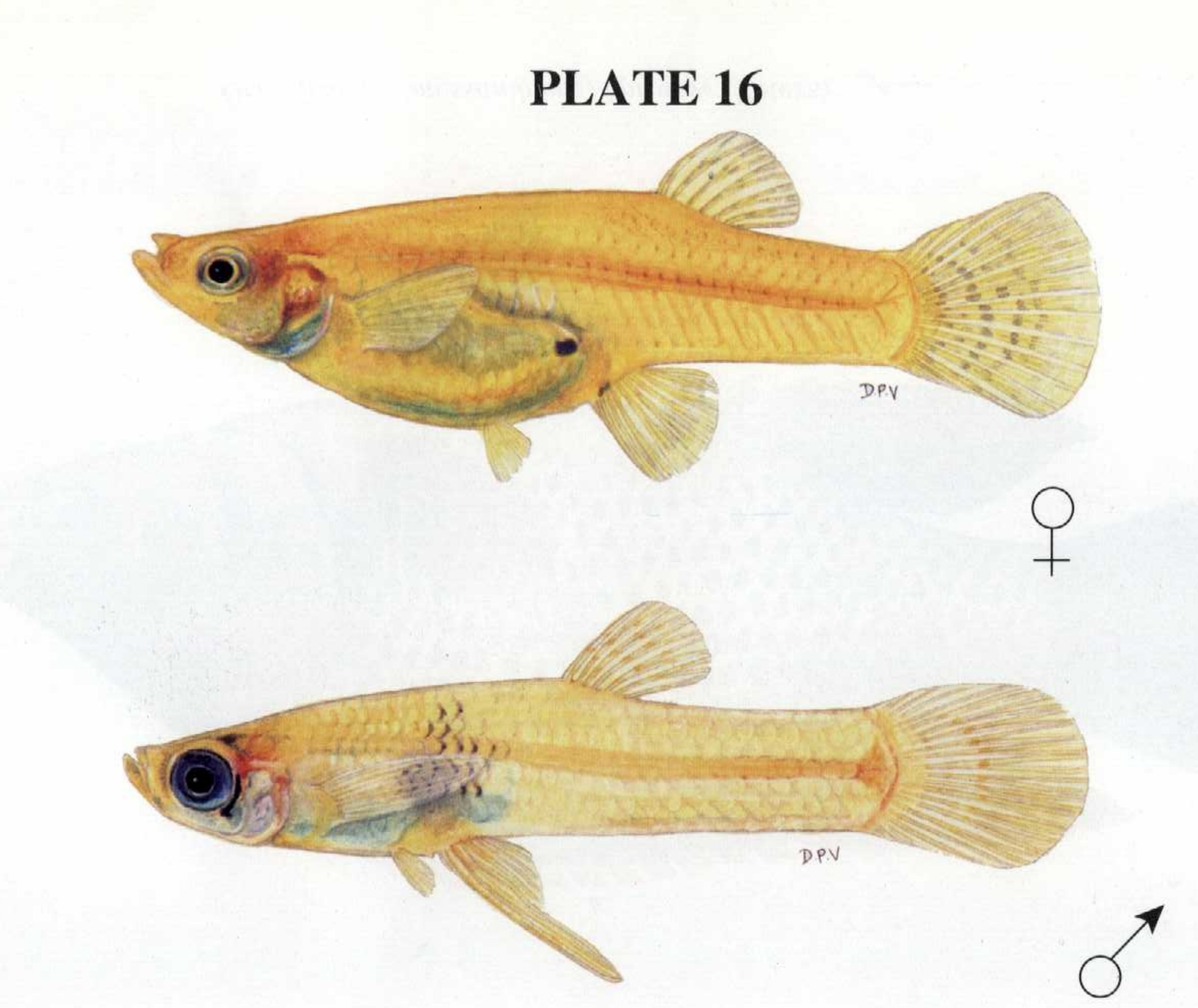
Ctenopharyngodon idella C. & V. مبروك الحشائش

PLATE 15



Oreochromis (mossambicus) korogwe **(Peters)** بلطي موزمبيقي

PLATE 16



Gambusia affinis (B. & G.) جامبوزيا - آكل الناموس

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INDEX OF SCIENTIFIC NAMES

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الأسمـــاء الشائعة لأسمـــاك النيـــل

الشكل الصفحه

BIOGRAPHY OF THE AUTHORS

PROF. DR. HELMY M. BISHAI

- Born in 1926 Assiut Governorate, Egypt.
- B. Sc. (Hons) Distinction, First Class Honour, Cairo University, 1946.
- M. Sc. (Zoology) Cairo University, 1951.
- Ph. D. King's College, Newcastle Upon Tyne, Durham University, U.K, 1954 (Fish Biology and Aquaculture).
- Demonstrator of Zoology, Faculty of Science, Cairo University, 1946.
- Research Worker, Ghardaqa Marine Biological Station, 1949 - 1951.
- Member of a Mission for Ph.D. Durham University, U.K., 1951-1954.
- Lecturer of Zoology; Zoology Department, Cairo University, 1955
- Assistant Professor of Zoology, Zoology Dept., Cairo University, 1966.
- Professor of Fish Biology and Aquatic Sciences, Cairo University, 1973.
- Chairman Zoology Department, Cairo University, 1978.
- Professor Emeritus Zoology Department, Cairo University, from 1983 -

Secondements to Universities

- University of Khartoum, Faculty of Science, Senior lecturer 1958 - 1961 supervising research on Fish Biology and Fisheries.Founded a school of research workers which was the basis of the further research at the " Hydrobiological Research Unit " Khartoum.Carried several expeditions along the River Nile in Sudan from Khartoum to Juba till its borders with Uganda, where studies were carried out on the physicochemical characteristics of the Nile, and its aquatic fauna, fisheries and aquaculture during 1959-1961. The results of this study are considered basic for that area.

- King Abdel Aziz University, Jeddah, Saudi Arabia, 1978 - 1983. Chairman of Medical Biology Department and external examiner to theses in Marine biology.

- Chairman of Committee for promoting staff members to Professorship in Zoology and Biological Oceanography. Supreme Council of Egyptian Universities 1989 - 1995.

- Vice Chairman Program of Natural Fisheries Resources, Egyptian Academy of Science and Technology, 1984 - 1996.

- Member of the Committee of National Institute of Fisheries and Oceanography for promoting staff members to assistant professorship and professorship, 1985 - 1994.

- Chairman of the Committee for Exploitation of Marine Resources and Fisheries, South Eastern Egypt, Egyptian Academy of Science and Technology.

- Consultant to the Ministry of Irrigation for Biological Control of Aquatic Weeds and construction of grass carp fish hatcheries, 1976 - 1978.

- Expert of Marine aquatic sciences, Natural Biodiversity Unit (NBU); Egyptian Environmental Affairs Agency (EEAA), Cabinet of Ministers, ARE, from July 1993 - July 1995 where he took an active part in preparation and supervision of " Egypt Country Study on Biological Diversity". The results of this study on Fauna and Flora of Egypt and Plan of Action were contained in about 60 parts.

- As a contribution to the Country Biodiversity, he prepared and supervised special volumes of Inland lakes of Egypt : (Lake Nasser, Lake Qarun, Lakes Wadi El Rayan), in addition to Wetlands of Egypt (Lakes Bardawil, El Manzala, Burullus, Mariut and Idku).

- Co-author for many University reference books on Biology, Zoology, etc.

- Translated to Arabic a number of books and articles in scientific magazines as :

- Animal life - MacDonald Educational Series (5 Books).

- Scientific American, [Arabic issue - Kuwait]

- Many popular books.

- Co-author for many University reference books on Biology, Zoology, etc.

- Translated to Arabic a number of books and articles in scientific magazines as :

- Animal life - MacDonald Educational Series (5 Books).

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- Many popular books.

Biography included in the following

- National Encyclopedia of Eminent Egyptian Personnel State Information Office, Egypt 2nd Edit. 1992
- Marquis Who's Who in Science and Engineering, 1st Edit 1992/93.
- Five Thousand Personalities of the World, American Biographical Institute Edit Four, 1994.
- Men of Achievement, 16th Edit, 1995. International Biographical Center, Cambridge, England.

Membership of Organizations and Directories

- FAO expert in Fish Biology and Aquaculture.
- "International Directory of Oceanographers" Nat. Acad. Sc. Washington DC 1994.
- World List of Limnologists, 1971.

International Meetings

* Challenger Society Meeting, U.K. 1952.
* British Association for Advancement of Science Belfast 1952.
* XXIX Georgikon Days Keszthely " Fish, Fisheries and Natural Waters," Hungry,1982.
* Annual Meeting (ESA) Ecological Society of America on " Biological Diversity" University of California, Davis August 1988.
* Meeting of Experts to Assess the Effectiveness of Regional Seas Agreement. UNEP December, 1993, Nairobi, Kenya.

Member of the following Societies

* Northamberland Natural History Society., U.K.
* Egyptian Zoological Society.
* Zoological Society U.A.R. Co-editor of " Proceeding Zoological Society U.A.R". [Egyptian Journal of Zoology].
* Ecological Society of America, (ESA).
* Member of the Society of Egyptian Graduates of British Universities.

- Published more than 52 articles in international journals in the field of Fish Biology, Aquatic Environment and Limnology. Supervised more than 20 theses (M. Sc. and Ph. D).
- Awarded Certificate of Appreciation from King Abdel Aziz, University Jeddah, Saudai Arabia 1401/1402 H.
- Awarded Certificate of appreciation from Syndicate of Scientific Professions, Egypt for Pioneers in Life Sciences, 1989.

His studies dealt with fish biology of Nile fish in Egypt and Sudan, as well as aquatic environment, Egyptian Lakes, Marine fishes and Fisheries of the Nile, Lakes and Mediterranean.

DR. MAGDY TAWFIK KHALIL

-Date of birth : 11 April, 1952.

-B.Sc. in Zoology from Faculty of Science, Ain Shams University in 1973; M. Sc. in 1978 and Ph. D in 1985 from Syracuse University, New York, U.S.A, and Ain Shams University; joint supervision.

-Demonstrator at Zoology Department, Ain Shams University in 1973; Assistant Lecturer in 1978; Lecturer in 1985 and Assistant Professor in 1990.

-Lecturer in the Institute of Environmental Studies and Research, Ain Shams University (Part-time), since 1986; in the Faculty of Education in Oman 1988 -

1992, where he was involved in a project to study the ecology of Oman coasts. Visiting professor to the United Arab Emirates University, Biology Department in September 1996.

-Represented Ain Shams University in 14 conferences and symposia; internationally and locally, such as the Second International Conference for Fish Resources Development in Egypt (1986); International Symposium for Bioindicators of Pollution, Cairo (1986); Second International Symposium on Tilapia Aquaculture, Bangkok, Thailand (1987); the first National Conference on the Environmental Studies and Research, Cairo (1988); the First International Conference for Trace Metals in Lakes, Canada (1988); Workshop on Data Management of Biodiversity, Cairo (1995) and the Scientific Research and the Biodiversity in the Arab Countries, Syria (1995).

-Active member in 10 scientific international and local societies such as the Ecological Society of America, USA; International Association of Astacology, USA; National Geographic Society, USA; International Center for Living Aquatic Resources Management, Philippines; Zoological Society of Egypt and the Egyptian Association for conservation of Natural Resources, Egypt.

-Co-researcher of 10 scientific projects such as the Egyptian - American Project for Developing Lake Qarun (1973-1978); Development of Lake Manzala, under the supervision of UNEP and a Canadian Company (1979-1980); American project for investigating the water quality and the effect of the industrial wastes upon three riveres systems in Central New York, USA (1981); Testing of Echinostoma liei as a biocontrol agent against Schistosoma mansoni, Theoder-Bilharz Research Institute, (1986-1988); the Effects of pollutants upon fauna of Lakes Manzala and Maruit (1987-1988); a project for preparing " Egypt Country Study on Biological Diversity", the National Biodiversity Unit of

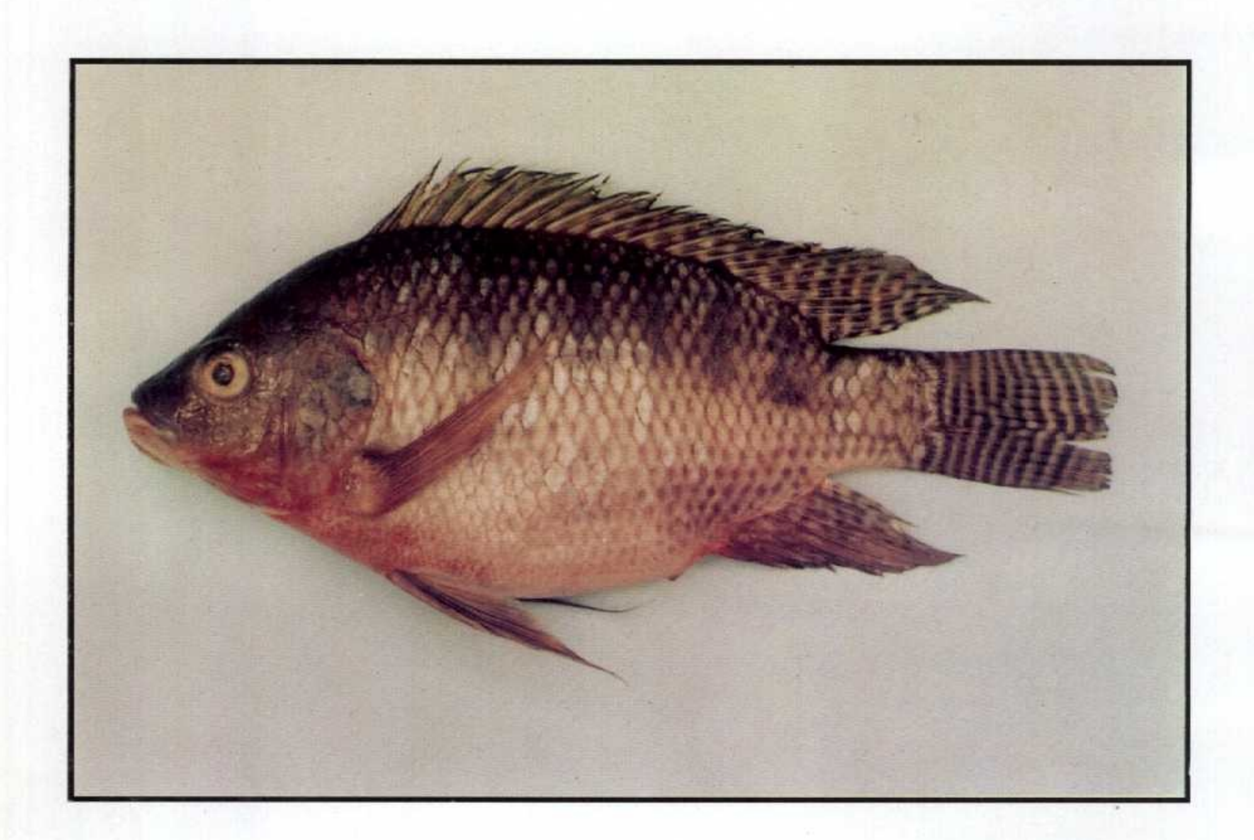
Egyptian Environmental Affairs Agency [EEAA] (1993-1994) with UNEP support. Through this project 8 detailed studies on species diversity of 8 taxa of freshwater organisms have been prepared. Moreover, 8 volumes on " Habitat diversity of Coastal Lagoons and Inland lakes " have been prepared. Also, he joined a project for studying the Biodiversity at Gulf of Aqaba, under the supervision of Natural Protectorates Department of EEAA (1994-1995).

-Published about 30 papers in the international and local journals in the field of aquatic ecology and pollution and supervised 10 theses in the field of aquatic ecology at Ain-Shams University, Faculty of Science and Institute of Environmental Studies and Research.

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أسماك المياه العذبة في مصر

تأليف

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استاذ بيولوجيا الأسماك والأحياء المائية
كلية العلوم - جامعة القاهرة

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